BOOSTING YOUR ECONOMY BY MAKING MONEY VIRTUOUS

Henk van Arkel, Lluís Muns Terrats
& Juliette Alenda-Demoutiez

OPTIONS TO **RESTRUCTURE THE BEHAVIOR OF MONEY** IN YOUR COMMUNITY

STRO
SOCIAL TRADE ORGANISATION

Endorsements

International organizations

- **Deborah S. Rogers: "A very accessible and helpful book for those devoted to true local development."** See page 36
- **Gwendolyn Hallsmith: "Wow, fantastic book!"** See page 36
- **Prof. Dr. Herman Wijffels: "These innovations can take us several steps further."** See page 124
- **Garry Jacobs: "A must-read for leaders aiming to create sustainable and thriving local economies."** See page 15
- **Wim Boonstra: "Local money systems can play an important role in supporting local communities."** See page 125

USA

- **Douglas Rushkoff: "These tested approaches to bottom-up value exchange will become increasingly necessary."** See page 14
- **Richard Heinberg: "We should study and implement this currency hack."** See page 15

Brazil/Latin America

- **Eduardo Diniz: "Essential and inspiring for activists and researchers interested in local development, a fundamental for building a sustainable future for our planet."** See page 35

Africa

- **Mercy Wanjiku Kamau: "Very relevant to rural Kenya and other rural African economies."** See page 227

Asia

- **Wen Tiejun: "From the Chinese perspective, this is very interesting."** See page 16
- **Bart Minten: "A thought-provoking read for those interested in economic development strategies."** See page 124
- **Catharina Any Sulistyowati: "This book explains the problematic implications the current economic system for countries like Indonesia."** See page 35

Europe

- **Wolfgang Streeck: "Giving left-behind communities a perspective of greater independence from the financial markets."** See page 125
- **Rens van Tilburg: "A tool to counter the Amazonization that is sucking life out of the high street."** See page 227
- **Prof dr Ruerd Ruben: "This analysis invokes basic economic principles such as linkages and multipliers."** See page 228

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Juliette Alenda-Demoutiez
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(STRO)

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A print edition is being prepared through another publisher.
At https://www.socialtrade.nl/english/publications you will find information about that as soon as it is available.
Spanish, French and Greek versions are in preparation, where a chapter will be added addressing the specific situation in that country.

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About the authors

Henk van Arkel is heading the Social TRade Organisation (STRO), with a team in Utrecht (Netherlands) and teams in Montevideo (Uruguay) and Porto Alegre (Brazil). STRO is committed to delivering analysis, methods, and software that help communities to improve their lot. To that end, the R@D effort described in this book was executed. Henk also initiated the team that developed the prize-winning Cyclos Fintech capable of facilitating both banks and communities.

Juliette Alenda-Demoutiez is a researcher at Radboud University, Nijmegen, in the chair of Economic Theory and Policy. She is actively working on just transformations for sustainability from different perspectives and through different networks.

Lluís Muns Terrats coordinates projects that link public administration spending management with local payment systems in Spain. He's working at Observatori de la Moneda Complementaria, based in Barcelona.

"The root of the current global crisis is the financial excesses created by the indiscriminate issuance of hard currency in the United States and the West. Still, money is a scarce factor among most disadvantaged groups. The authors present various experiences of intensifying the use of money among disadvantaged groups as an effective practice to address this contradiction. From the Chinese perspective, this is very interesting, especially since in rural China grassroots developed many financial innovations. I hope this book will be conducive to increased exchange."

Wen Tiejun

Professor of Institute of Advanced Studies for Sustainability, Renmin University of China. Winner of the State Council's Award for Outstanding Contributions in 1998 and the CCTV Annual Award of China's ten top Economic Talents (2003).

"An important guide to the history, present, and – most importantly – future of local exchange. As global monetary systems are rendered increasingly brittle by the unsustainable goals of financialization, these tested approaches to bottom-up value exchange will become increasingly necessary. At last, the best knowledge and best practices have been collected in one place, and in an actionable way."

Douglas Rushkoff

Author (20 books) and documentarian,
one of world's most influential thinkers

"…a groundbreaking guide by leading experts on community and regional monetary systems with long practical experience applying financial strategies to improve recirculation of money within communities and stimulate local economic development. With compelling case studies and actionable insights, this book demonstrates how communities can harness local currencies and Fintech to boost economic resilience and social cohesion. A must-read for policymakers and community leaders aiming to create sustainable and thriving local economies."

Garry Jacobs

President & CEO, The World Academy of Art and Science

"Current monetary systems are designed to funnel wealth to those who designed and control the system – rich investors. What if the way currencies work were tweaked so as to promote the retention of wealth in local communities? The authors of this important book have identified how to do this, and have data that it works. If we're serious about eliminating poverty and making our communities more economically resilient, we should study and implement this currency hack where we live."

Richard Heinberg

Senior Fellow of Post Carbon Institute,
author of 'The End of Growth and Power'

For Dara, Tobin and Melle,
who hopefully will come to see a world with
less polarization and more cooperation.

For all the colleagues, friends, family
who have been envisioning and fighting
for a better and just world.

Chapter 1

New ways to reinforce the Social Economy in your community

Introduction

In modern times, more than half of the world's regions cannot optimize their potential because of the way the economy is structured. Money, as the main organizer, fails to stimulate the use of productive capacities and plays people off against each other without optimizing social cohesion.

This book is about the possible options to restructure the behavior of money in your community. The focus is on maximizing the impact of the money that circulates within communities in such a way that it improves the organization of the local economy and its social structure. A second focus is on the role of technology, specifically the role of Fintech, to boost local economies.

This book is based on real-life examples. These examples demonstrate how productivity can increase, leading to higher local incomes, more local employment, and a strengthened social structure. We have learned about the importance of exports, remittances, and specialization for economic growth, but we rarely hear about why these strategies sometimes fail to deliver as expected. As we introduce new ways to boost local economies, we will provide counterarguments to traditional economic thinking and offer a new perspective on the role of these exports, remittances, and specialization.

In this book you will also get informed about the innovations in STRO's payment software **Cyclos**. In 2014, Cyclos was rewarded by the ETA (Electronic Transaction Association) as e-pay innovation award winner.

Evidence[1] – not discussed in this book – suggests that stronger clusters of Micro, Small, and Medium Enterprises (MSMEs) increase the potential to engage in successful exporting, ultimately increasing the volume of money entering the local social economy. Focusing on strengthening local MSMEs provides a different perspective than a focus on simply increasing exports, especially exports of raw materials. The strategy of prioritizing exportation might have delivered a trickle-down effect in some places. But for billions of people, this approach has not worked. They remain poor, and their communities' social structures may have even been eroded. When the MSME sector thrives and has more opportunities, wealth can trickle down much more effectively, spreading to other sectors. This is different from export-based development strategies, which promise wealth, will trickle down but often prove to be false, with a disappointing overall impact on local development.

This book argues that encouraging exports in a specific sector carries the risk that those exports will make the currency more expensive, inhibiting exports in other sectors and making it harder for local firms in their home market to fend off competitors from abroad. Also, this emphasis on exporting can distract from the need to optimize the organization of the local economy. We hope that the practices described in this book will convince you that other, even if less well-known, opportunities exist.

Why, then, do politicians focus on exports? Aside from potentially dubious motives, they likely feel pressured to prioritize short-term gains due to the competitive political arena. Short-term desires and profits often dominate over long-term wealth creation. In many export stimulation projects, the impact on the

1 See for example: https://www.qeios.com/read/O1EI8E#:~:text=Clusters%20represent%20a%20specific%20competitive,et%20al.%2C%202005

balance sheet is lacking: the consequences of shrinking natural and social capital and how it affects long-term income generation and basic living costs.

Returning to the book's focus, development is about raising productivity through specialization. Specialized economic actors need each other's products and services, and they need a means of exchange to obtain them. Money serves as the means of exchange to organize that exchange. However, money is also used to store wealth. These uses often conflict: to be attractive for storing wealth, money needs to be scarce, while facilitating exchange requires a much larger money supply. The scarcity of money and the costs associated with accessing it benefit producers who gain markets by bypassing competitors. This leads to a peculiar contradiction: as in figure 1.1, money moves to the lowest part, modernization flourishes, products become more sophisticated, and investments in production processes skyrocket. In chapters 5 and 6 we elaborate on the reasons why money leaves poor communities too soon. Consequently, at the high end of the seesaw, there is too little money, businesses are priced out of markets and the economy comes to a standstill with almost no chance of joining the modern economy. This disastrous inefficiency excludes poor people from participating meaningfully. With the money gone to the lower end of the seesaw, there is no money left to facilitate economic relationships. Dangling in thin air these communities cannot even develop mutually beneficial relationships as producers or service providers for each other. The money needed to organize that relationship is not available.

We cannot deny the observation that there would be much less poverty if the dominant global monetary system would not only be efficient in serving the rich economies but also would effectively organize poor economies. If money were designed to circulate within less affluent communities before leaving, it could be used

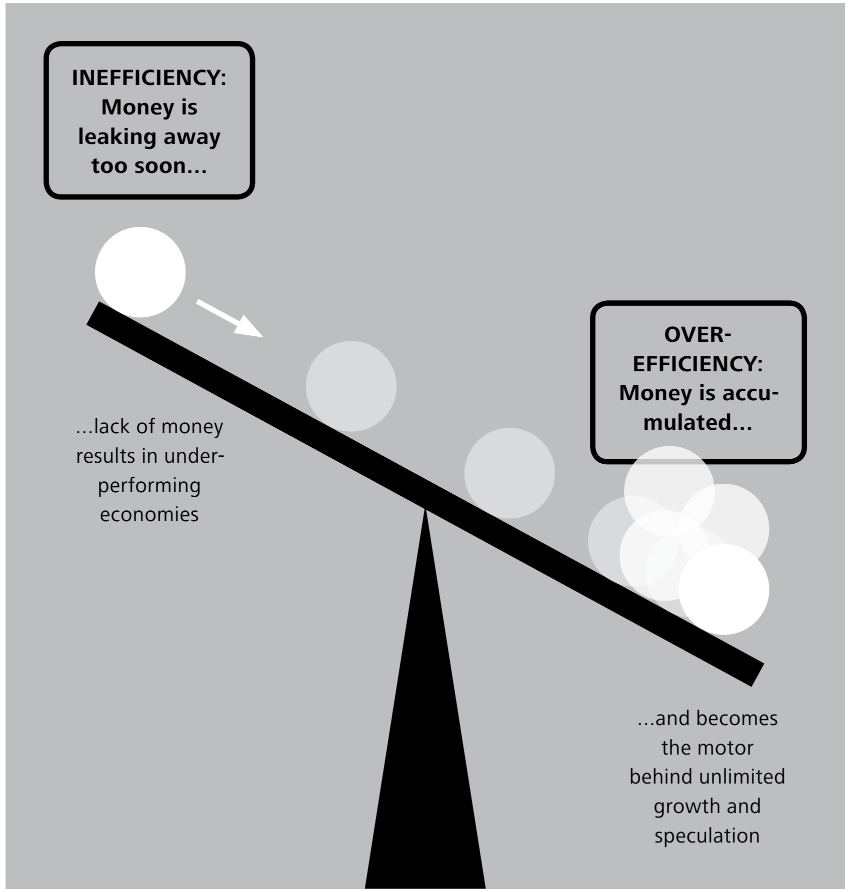

Figure 1.1
The money is accumulated in rich areas and pushes economic growth extremely efficiently, while the process of accumulation leaves poor areas with a lack of purchasing power to facilitate local production for local consumption. Money to organize their economy can only be obtained against interest or profit, leaving the community with a future with potentially even less money.

multiple times locally. Such money would facilitate the development of these economies based on local production for local consumption. These activities would make clusters of MSMEs stronger, which could then serve as a springboard for some companies to participate in trade with other regions, integrating these poor areas into the global economy.

As long as money lacks this quality, it is highly inefficient in organizing the economies of the majority of humanity and neglects its potential. This contradiction between efficiency at the rich end of the market and inefficiency in the poorer markets results from several "prisoner's dilemmas" that we will discuss in more detail in this book. One consequence of such a dilemma is that governments and consumers, driven by short-term effects and price differentials, choose to spend their purchasing power higher up the technological pyramid rather than keeping the money locally for some time first. While this choice is understandable in the short term and individually, it ultimately leads to perpetual underdevelopment in less prosperous areas.

This book identifies such detrimental developments as the emphasis on buying in installments, which directs money towards products from the rich highly industrialized economies even before that money has had the opportunity to contribute to organizing the local economy. However, the reasons why money leaves poor economies quickly, are only a secondary concern. What this book is primarily about is how to tackle the lack of money to organize less-performing economies.

We call this approach the **Social Trade Booster**. This Booster increases the number of times local businesses can spend and earn money before it leaves for higher-level markets and top-tier products. The Social Trade Booster is based on many years of research and development (R&D) to find ways to make money behave differently and serve all economies. What might surprise you is that reprogramming money to maximize its impact on the

local economy is far easier than most people think. You will read about little-known opportunities in this regard. We hope the information will inspire you to introduce the Booster concept in your community.

One word of caution: If you choose to pursue this path, you may encounter some people who are reluctant to introduce such innovations when you discuss these possibilities with them. They might hide behind the argument that the unknown risks associated with such a different approach would outweigh the potential benefits. Interestingly, this was precisely the argument President Roosevelt used when Irving Fisher, the most famous economist in the US at that time, suggested countering the Great Depression by an approach from which we developed the Booster.

The city of Santa Coloma de Gramanet, near Barcelona, Spain, has chosen a remarkably different motivation. We will learn that this local government feels it is their primary responsibility to their local taxpayers to optimize the overall long-term impact on the local economy of the money they spend. They prioritize this goal over the kind of efficiency that leads money outside the community to higher-level markets.

This book will show how authorities can make different choices when spending money. We will explore how local procurement policies can help to organize the local economy. We will also learn **how Fintech can help communities realize this effort and boost their Social Economy businesses**.

Innovative, dedicated payment software facilitates innovative financial interactions within a community and the public spending process. It also enables regions to liberate money from the control of the financial markets and make it work for the community for a fixed period. Such fintech can even be used to correct an exchange rate that does not fit the local economic reality because such a rate is based on the economy of dominant regions elsewhere in the country.

About STRO and innovative payment software

Scattered throughout this book, you'll encounter references to the Social Trade Organisation (STRO). STRO's R&D efforts led to the creation of this book and the innovative Cyclos payment software. At STRO the detrimental effects of the current monetary system were recognized over 50 years ago. At that time, our focus was raising awareness about climate change risks and advocating for taxing the use of raw materials and fossil fuels instead of labor.

25 years ago, we shifted our focus towards finding ways to make money *behave differently*. We found software, mainly used by regular banks for traditional mobile banking, containing unnoticed innovative functionalities. We initiated a R&D program to research and test these untapped possibilities, thus developing alternatives to contemporary money.

That resulted in the Social Trade Organisation's payment software **Cyclos** (Cyclos.org), and emerged in 2014 as the international winner in the Electronic Transaction Association's (ETA) search for the most innovative payment software (see also Chapter 10). Now, after many subsequent upgrades, Cyclos successfully integrated all the innovations mentioned in this book, making it ready to support the implementation of *the Booster*.

Cyclos
Payment software

These Fintech innovations can even offer new perspectives on a global scale. For example, they can make the money sent to families by migrant workers a game-changer in poverty reduction. In this case, as well, the money needs to be reprogrammed to increase, or multiply, its circulation within the environment where these families live. With each additional time the money is spent and earned in these communities, the impact of the remittances on businesses and job creation grows. More businesses can earn an income, and more jobs are created. Consequently, fewer people are forced to follow the path of earlier migrants, and in the long run, migrant workers might find options to return.

Clearly, this is not as easy as it sounds. Bottlenecks will arise, such as convincing families to receive money that they can only spend locally before it is used to import modern comforts or gadgets from the globalized market.

Buying Local using Fintech delivers regional development

This book describes several successful examples of the Booster strengthening local Social Economies. These are discussed and analyzed against the paradigm/hypothesis that the availability of potential clients (individuals and companies with purchasing power) is crucial for businesses. Clients provide the opportunity to sell and consequently the motivation to produce.

Let's examine what happens during a global depression. Before the depression, companies have clients, and people have jobs. However, when deflation starts, people postpone buying, perhaps fearing an impending depression and wanting to save. This saving reduces available money that businesses would otherwise earn. With lower earnings, businesses invest less, impacting companies selling investment goods.

The weakest businesses fall first, leading to unemployment and reduced spending by laid-off workers. This cycle of worry and saving leads to further business closures. Crucially, businesses have fewer options to sell goods or services. In wealthy countries, governments counter depressions with additional spending and lower interest rates.

Underperforming economies face similar challenges constantly, though few consider poverty a permanent depression. Many view limited clients and few local sales options as normal. Cause and consequence become trapped in a vicious cycle. Money leaks away too quickly. With minimal local spending and rapid outflow, it's unsurprising that local SMEs struggle. Consequently, introducing additional money into these communities becomes difficult for governments.

The Social Trade Booster focuses on increasing local sales options. Social Trade refers to trade within communities, connecting local entities, enabling specialization, and adding value to products or services. This trade strengthens social cohesion and increases local economic resilience. The term "Booster" refers to an impulse multiplying the use and impact of limited local money. The Booster enhances local trade, fostering productive and commercial activities, and leading to local economic growth.

This approach is based on the hypothesis that wealth creation occurs when people can specialize and increase productivity. However, this is only possible if trade connects these specialized individuals. Without a smooth exchange of specialized products, there's little motivation to find or create market niches and enhance the local economy's complexity and resilience. Therefore, facilitating this exchange is paramount. Currently, money meant to organize this exchange leaves the community too soon, prioritizing its function as a facilitator only secondarily. Additionally, money creation focuses on scarcity and profitability, limiting its ability to stimulate and connect with specialization. In underperforming communities, such limitations restrict local specialization and wealth creation.

Money needs different priorities, such as in Social Trade, where it focuses on stimulating local businesses to find market niches and specialize.
In a "winner-takes-all" economy, the chance to balance production with consumption is lost. Many local economies end up with limited sales opportunities, hindering business creation and survival, leading to underutilized productive potential. This results in low wages, further limiting consumption and reducing available money to stimulate and organize potential production.

Improving local economic resilience is another reason to move away from framing permanent depressions as poverty. This is especially crucial in a world economy stressed by climate change.

As will be explained more easily in the chapters the flows of money can create unexpected outcomes. For example the remittances migrant workers send to poor regions does not always increase the options for local businesses to make a living. This mirrors situations where one economic sector generates significant export income, driving up the currency's value. Economists call this phenomenon the "Dutch disease". This disease spreads when exports of energy, raw materials, agricultural products, or migrant remittances increase demand for the local currency and raise its value. The problem worsens when export earnings concentrate on a few individuals who primarily use that money to buy imported goods. More research is certainly needed to understand this effect to see if remittances prolong the need for migration.

From Keynes to Fisher

The approach explained in this book should not be unfamiliar to economists. The renowned economist Keynes played a critical role in understanding the Great Depression and offered insights into how additional government spending could stimulate local demand, providing businesses with more sales opportunities. Such increased expenditures would reach entrepreneurs, enabling them to produce, pay wages, and kickstart economic recovery. However, additional government spending is not an option for poorer countries, especially underperforming regions. Still the need for companies to meet options to sell is very relevant in underperforming economies today.

Irving Fisher, the famous American economist who developed the equation of exchange reflecting economic growth or contraction, recognized that additional money might often be unavailable. He sought a solution to the Great Depression by increasing the effectiveness of existing money. Following Silvio Gesell's recommendations, practiced in the city of Wörgl, he advocated for charging fees to all who held onto money without purchasing goods or services. This "demurrage" charge on delaying money usage incentivizes quicker spending, allowing money to facilitate economic activity.

Keynes was aware of Gesell's approach and even referred to him as an "unduly neglected prophet". However, Keynes' focus was on the dominant English economy of his time, a stark contrast to the reality of underperforming economies today. He believed additional government spending was a better solution. U.S. President Roosevelt followed Keynes' lead with The New Deal, neglecting Fisher's proposal.

The rationale behind this choice can be found in the report Roosevelt's advisors delivered regarding Fisher's solution.

They concluded that while Fisher's approach might effectively end the Depression, it could also lead to altered social relations. One can imagine how a tax on money that is not spent creates market conditions where inidvidual with significant savings and huge funds are forced to lend out their money asap to avoid paying tax, balancing their position with that of entrepreneurs in need for loans or investors. Such a balance could result in near-zero interest rates, as witnessed in recent years when wealthy countries benefitted from these conditions, enabling large-scale investments in sustainable energy. Fisher's recomendation contrasts with approaches like Quantitative Easing, recently employed by the FED and ECB, which might offer some assistance but potentially at the cost of further wealth polarization and resulting social unrest.

Studying the potential of existing examples

Following this chapter, you'll find real-life examples showcasing what is possible. Chapters 2, 3, and 4 describe these cases, providing evidence that local economies can be revitalized. Throughout the book, "local" can refer to a country in a currency zone, a city or region, or even a distinct community within society. These case studies demonstrate how existing expenditures can be leveraged more effectively to support the development of the local social economy.

Each chapter explores vastly different circumstances. **Chapter 2** tells the story of *Preston*, an English city that faced economic decline roughly 15 years ago. Within a few years of implementing the so-called Community Wealth Building approach, the city began gaining economic prosperity and a stronger sense of community. A key element in Preston's process was the collective effort by major local procurers to purchase goods and services locally more often. While the local government initiated this shift, other organizations within the community, known as "anchor organizations", followed suit. These are public or private institutions committed to considering the community's long-term interests in their procurement policies. The result? In 2023, Preston received the UK award for Best City for Families, following its earlier recognition as the most improved community in the UK.

Chapter 3 presents a contrasting case study, focusing on a community facing a crisis under entirely different circumstances. It recounts how the mayor of *the small Austrian town of Wörgl* developed an innovative approach to combat the effects of the Great Depression in the 1930's. He implemented measures to encourage the local government's spending to circulate more frequently within the community, even after it had been disbursed. The innovations implemented in Wörgl offer a compelling example of how money can be "reprogrammed" to better serve the community.

Drawing from the experience in Wörgl, STRO developed an approach focused on making money to serve the development of a severely impoverished neighborhood in Fortaleza, Brazil. **Chapter 4** describes the *Fomento approach*, which demonstrates how donor or government funds can be directed to contribute more significantly to economic development. In that neighborhood Fomento helped to reduce poverty significantly, transitioning the neighborhood from a situation where residents collected paper and plastic scraps for recycling to one where less poverty is evident, even with litter like aluminum cans (worth half an hour of paper collection) visible on the streets.

The Fomento approach utilized donor money intended for classroom construction to establish trust in a local payment system. This strategy tripled the impact of the donor funds compared to traditional methods. Additionally, it enabled a quarter of microcredits in the neighborhood to be based on a local payment system, reducing reliance on high-interest loans.

How does a type of money affect the economic potential?

To develop a suitable approach for improving your community's economy, you need to understand the factors driving its underperformance. Chapters 5, 6 and 7 will help you focus on the impact of current money usage. We hope that discussing the mechanisms underlying economic transactions encourages you to view your local economy from a different perspective. This understanding will hopefully explain why some of the showcased examples succeeded while other initiatives did not. Analyzing the reasons behind economic underperformance brings us closer to answering the question of what your community can do to change these dynamics.

One factor we must consider is how ideology shapes our perception of the relationship between poverty and current money usage. **Chapter 5** discusses the book's central hypothesis: *the way money instrumentalizes the organization of local economies and the current priorities of this type of money often organize the economy far from optimally* (see again figure 1.1). **Chapter 6** provides an inventory of reasons *why* regions end up with insufficient means of exchange to properly organize their local potential. **Chapter 7** focuses on one specific reason: *the exchange rate*. We observe that many regions and even countries struggle with an exchange rate that does not align with their local economic circumstances.

Following this theoretical exploration, **Chapter 8** offers an example of what can be done in a poor region facing an unsuitable exchange rate. In this specific situation, most export earnings are used to purchase diesel fuel, necessary to maintain agricultural output. Chapter 8 describes how a poor community, supported by STRO's R&D, addressed the effects of an unsuitable exchange rate. This case study also demonstrates *various ways to deal* with the lack of money resulting from a negative trade balance. The chapter additionally tells the story of a medium of exchange based on local production, community spirit, and local trust.

The Social Trade Booster: A new approach to boost the impact of existing expenditures

Based on all these elements, the **chapters 9, 10, and 11** are about using the lessons learned. What can communities, regions, and countries do today, when they have to deal with an exchange rate that does not fit in their situation? And/or, how to solve the dilemma of individual choices for short-term gains, breaking down the long-term perspectives for the community? How to secure money to organize the local economy better, to serve it longer and more intensively?

These chapters also deal with *Fintech solutions* that enable a dedicated payment environment in the form of local current accounts. With the introduction of a dedicated ruling for such accounts, the community can create a quasi-exchange rate comparable to the one that was used in Wörgl in a non-digital way.

These tools can be used to boost the circulation of money in a targeted area. By increasing the circulation of money, the multiplier grows, and more impact can be derived. Again, it is Wörgl who provides the example of how to boost the circulation of money, enabling a limited volume of money to organize the local economy.

Using the lessons learned in Chapter 2, these chapters focus especially on reprogramming the money that flows through the hands of local community organizations. These experiences are combined with those of Chapter 3, which focuses on the introduction of a *quasi-sub-exchange rate*. In the case described in Chapter 3, the exchange premium was made available to the city, which in turn used it to pay unemployed people to make community invest-

ments. The costs of the exchange fee were paid by those people who transferred their local money to national currency to spend outside the community. This fee thus stimulates people, up to a certain level, to reconsider where they spend their money.

Such a quasi-exchange rate comes with some disadvantages. To counter these, STRO developed a new technology that adds a time dimension to money. The software team succeeded in adding a time counter to the local accounts. This enables a ruling that programs money to serve the local social economy for a certain time, introducing an extra opportunity: when the money is circulating during a fixed period, a *time-based fee* will deliver a predictable income. Such income can be used to finance a premium to reward people who bring national currency under the local ruling, just like an exchange rate would do.

Chapter 12 presents the results of a brave initiative in the city of *Santa Coloma*, close to Barcelona. The data show that by using financial technology, it is possible to increase the impact of expenditures threefold. Subsidies to local sports and cultural events, and special support for vulnerable people, were provided in money that was conditioned to be used locally more often. The research data might convince skeptical people that communities do have an option to boost the impact of the money available.

Annexes

Over time comments and annexes related to the content of this book will be published on https://socialtrade.nl/english/publications/. One of these annexes we like to highlight. It is about an application of the lessons learnt in this book in the field of remittances. We highlight this because if the 600 billion dollars by migrant workers to their families can be made to circulate two or more times extra in the poor regions when the circulation would be boosted while the Dutch Disease impact is reduced.

Guest writers are invited to add other annexes focusing on specific use of the Booster technology. One can think of research that focuses on the question of how the Booster can be used to make economically motivated migration less interesting due to an increase in the options to start a business and sell locally in the countries of origin. New opportunities are boosted by improved local circulation. Once money circulates locally more often, local businesses meet more purchasing power. That situation would make investing money locally in one's own business a better option than spending those savings on human traffic smugglers.

"The book reproduces the long and rich history of STRO's involvement in creating and maintaining local currencies in Brazil and many other parts of the world. From the creation of Cyclos, the most disseminated operational infrastructure for managing the operation of local currencies, STRO has been very active in providing the necessary inspiration for local communities to achieve social and economic development. The book provides a variety of examples of how local development is possible while discussing relevant economic concepts that are the basis for boosting local economies. This is an essential and inspiring book for activists and researchers interested in local development, which is a fundamental strategy for building a sustainable future for our planet."

Eduardo Diniz

Professor and researcher at the Center for Microfinance and Financial Inclusion Studies at Fundação Getulio Vargas, São Paulo, Brazil

"The way this book explains the problematic implications the current economic system has on the local economic development of many communities in countries like Indonesia is an eyeopener. The link with the working initiatives driving the local economy and beneficial for local communities offers new hope. I strongly recommend this book as a reference for developing a local economy."

Catharina Any Sulistyowati

School of Strategic and Global Studies,
University of Indonesia & Perkumpulan KAIL

"This is a very accessible and helpful book for those devoted to true local development. All too often, programs sold as promoting development allow outsiders to take advantage of cheap labor, land, or natural resources, while profits leave the community. This handbook will be a useful resource for Initiative for Equality in our quest to support community-led development to empower poor, socially excluded, and marginalized communities."**

Deborah S. Rogers

PhD; President, Initiative for Equality; Distinguished Fellow, Schumacher Institute

"Wow, fantastic book. Thanks so much for sending it along. Everyone who is interested in their local economy needs to read this book. It explains why local economies are hurt by national currencies and what they can do to create lasting local prosperity. The examples the authors provide of success stories, obstacles, lessons learned, and the ways in which they adapted their programs to solve implementation problems are invaluable for local economic development practitioners."

Gwendolyn Hallsmith

Executive Director of Global Community Initiatives, co-author with Bernard Lietaer of 'Creating Wealth and Making Money for Businesses'

Chapter 2

The Story of Preston: A Community Benefitting from Buying Locally

Introduction

In this chapter, you will learn how the impact of public expenditures on the local economy can be improved when there is more focus on local or regional suppliers. This focus could benefit cities and regions facing very different conditions. While many authorities are sympathetic towards buying locally, they still put into stimulating international trade.

While this chapter focuses on direct procurement of local and regional governments, other kinds of expenditures, such as the cash transfer programs in Brazil, India, and Mexico or subsidies and loans financed by the World Bank, WFP, and UNDP, could also increase their impact a lot if they would focus more on stimulating buying locally.

In 2018, the English city of Preston was declared the most improved city in the UK by the "Thinktank Demos", which classified cities in the UK based on various well-being criteria.

The improvements in Preston resulted from a change in the procurement policy by the local city council. In 2011, the city decided to prioritize purchasing from local and regional suppliers as often as possible. The motivation for focusing on local procurement was to support local businesses and entrepreneurs and combat the degradation of the local economy that had accel-

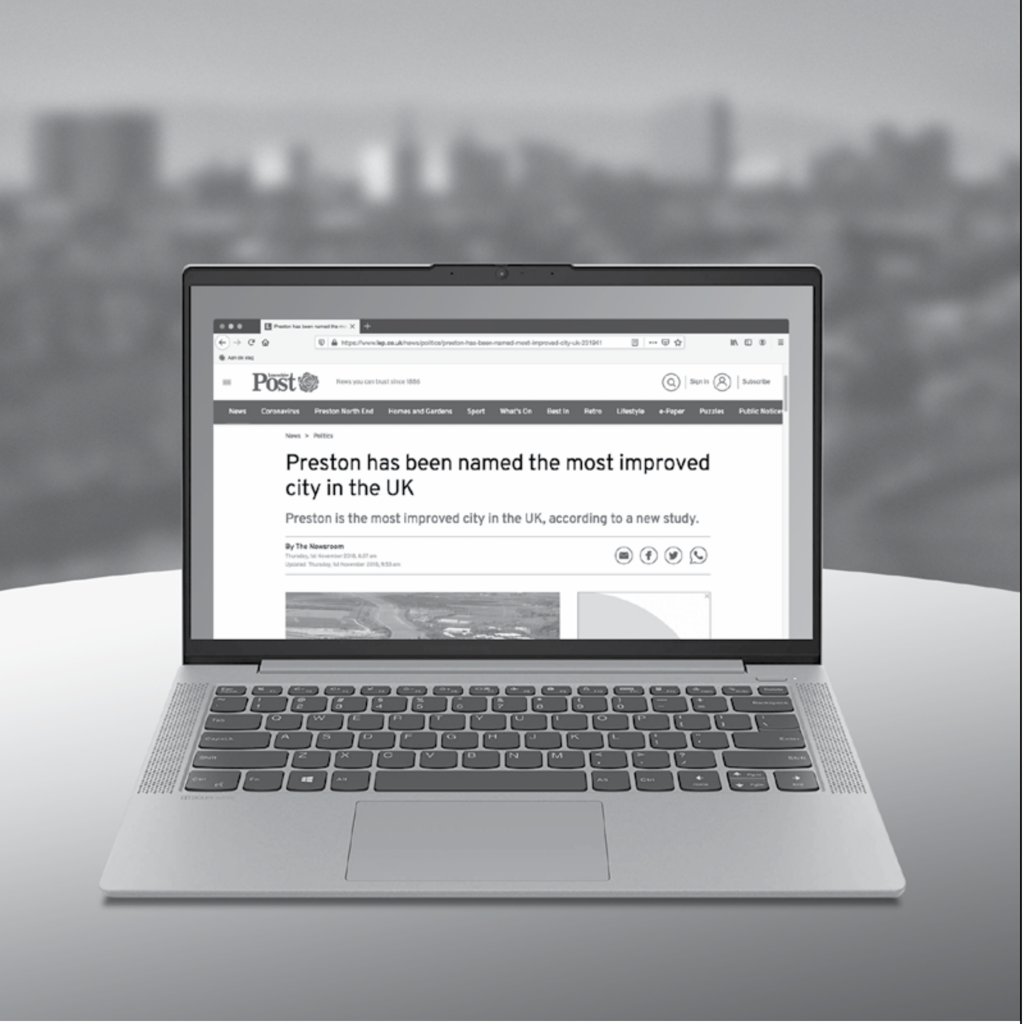

Figure 2.1
In 2018, *The Lancashire Post** announces that Preston is "the most improved city in the U.K." In 2023 Preston was elected as "best city to live in for families".

(*https://www.lep.co.uk/news/politics/preston-has-been-named-most-improved-city-uk-231941)

erated since the financial crisis of 2008. It is true that sometimes local purchases were more expensive; however, this was soon offset by a positive feedback loop: the increasing number of local purchases enabled better offers. Preston's story represents communities worldwide, even though the local contexts may differ. In the Global North, local economies have suffered from repeated crises in a continuous context of austerity since 2008. In the Global South, the informal economy constitutes a significant share of the national economy, implying very different objectives. Institutions also vary, ranging from strong decentralization as seen in European countries, especially Switzerland and North America, to a highly centralized level of economic decision-making as observed in some Latin American countries or Middle Eastern countries. (Ivanyna and Shah, 2012)

Overall, increasing local purchases more frequently has the potential to strengthen domestic economies. The bottom line is that relatively poor or impoverished places, from small towns to entire countries, can benefit from local spending when the economy is weakened.

The impact on the local economy of "buy local"

Preston was inspired by the Community Wealth Building concept developed in Cleveland, Ohio. In that city, buying local was combined with starting employee-run cooperatives. Since this obscures the impact of local procurement – the topic of this chapter – we will focus on Preston. (Singer, 2016; Sheffield, 2017; Manley and Whyman, 2021)

Most people underestimate the potential of local governments to reallocate part of their public expenditures. The boost this might provide for their local economy is also often underestimated. Finally, the options to enhance the impact of Fintech have yet to be discovered. In most places, buying non-local often seems less expensive, while the long-term cost to the community of that choice is considerable. Over time, with fewer sales, local businesses become more costly and less attractive. Ultimately, they disappear or never reach the quality/price level to become companies that can deliver quality. Such was the case in Preston, where, over many years, the local government had based its procurement on what they thought was the best offer. Price-wise and, of course, also from a marketing perspective, the larger companies from elsewhere seemed to be the best choice at first glance. For many years, the authorities of Preston believed that they were making the right choices to purchase what they believed to be the best quality for the lowest price. They felt they were acting responsibly toward their taxpayers. Over time, this led to fewer and fewer local purchases and an unwavering preference for suppliers outside the local economy. At some point, only 5% of the city's procurement remained within Preston itself. It became increasingly challenging for local producers to manufacture the demanded goods or services. With fewer clients, a gradual rise in costs occurred, making their offers even less attractive to their remaining customers. And what do you think it did to local tax income?

A brief history of Preston

Preston is a city of 140,000 people located in the northwest of England. The county of Lancashire, to which Preston belongs, was once the cradle of the Industrial Revolution. So, one would think there would be plenty of jobs. The industry did provide many jobs at first; however, hardly any of the money earned during the glory years of industrialization remained in the city. It flowed away toward more affluent regions and cities.

In the 1950's, Preston still had a substantial amount of industry, particularly in the electrical engineering sector. However, by the 1970's, very little of it remained. As Asian manufacturers began to dominate the market, the entire region lost numerous

Figure 2.2
Market Square, 1851.*
During the industrial revolution in the nineteenth century, the economy in Preston flourished, and in post-war England, the electric engineering industry created a lot of employment opportunities. As Asian manufacturers began to dominate the market, the entire region lost numerous jobs.

(* H.C. Booth, Harris Museum)

jobs. Although some economic activity has grown since then, poverty and inequality remained significant problems for many years, even in 2008, when the credit crunch rocked the world economy. Preston faced rapidly increasing unemployment, urban decay, and further de-industrialization. Preston's economy lacked resilience, and both the city's economy and the surrounding Lancashire County were thrust into a severe recession. Many local businesses suffered as a result. The economic downturn also had an impact on the outcome of the May 2011 local elections, in which the Labour Party achieved a resounding victory. However, just as the Labour Party came to power locally, the national government implemented severe cuts to municipal funding. The city's funds from the central government were halved. The crisis also led to the collapse of private investment.

A collective effort to buy local

Preston's new city council approached the newly elected Labour councilor, Matthew Brown, with a request to explore ways to boost the local economy. Brown was impressed by the initiative undertaken in Cleveland, where several large organizations opted to purchase from local businesses. This emphasis on local purchasing was quite unusual at the time, as most cities and regions were primarily focused on increasing their exports. Given this focus, it seemed incongruous not to buy from large international companies and global supply chains.

The new Preston city council, under Brown's leadership, chose to take a different path. Brown reached out to the Center for Local Economic Strategies (CLES), a Think Tank with extensive experience in supporting projects that center around collaboration between various stakeholders, including local governments and other local institutions, all aiming to strengthen and enhance the local economy. CLES proposed a Buy-Local campaign known as the Community Wealth Building Project, which can be found at

https://cles.org.uk/. The idea behind this project was to prevent purchasing power from quickly draining out of the local economy. The City Council embraced this proposal, and thus, in 2013, the project was officially launched.

The city council urged key institutions in Preston to carefully consider, for each purchase, whether and where it could be procured locally. These institutions, often referred to as anchor institutions (or anchors), primarily included semi-public and non-profit organizations situated in Preston. These organizations comprised Preston City Council, Lancashire County Council, Lancashire Police District, University of Lancashire, Preston's College, and the Housing Association.

Other cities can benefit from the recovery of their neighbors' local economies.

One thing is certain: other cities are shielded by local purchases because, in the long run, cities like Preston will still spend the same income they earned from exports. Of course, this might involve buying different products or services.
The real change lies in the impact of the anchors' money on the organization of the local economy. Another important aspect is that, in order to spend more locally, there should be untapped potential that can generate additional production.
In general, the longer a region has underperformed, the more time it will take for the local business community to begin producing goods or services that were previously procured from outside the region. In some regions, additional policies might be necessary, such as providing education on how to run a business or establishing a credit facility for startup companies.

Reversing a negative spiral

As previously mentioned, in the years leading up to the start of the project, there was a decline in the procurement of local goods and services. Local suppliers were typically smaller than their (inter)national competitors. Consequently, they invested less in marketing, making them less known to anchor institutions. Another factor may be that staff often believes they cannot be held accountable if the quality of work from large companies disappoints, simply because these suppliers are large. Without consciously realizing it, we tend to assume that familiarity demonstrates that large companies possess greater knowledge and capacity to deliver the best products and services. A procurement officer tends to play it safe when opting for a large company. In the event of any issues, they also know that the company can be easily located, and the reputation of the procurement officer would be less tarnished compared to if they had taken the risk of doing business with a lesser-known, smaller company.

Moreover, a sort of automatism develops, wherein if there is an existing relationship with one department of a large company, new orders tend to be quickly directed to another department within the same company. This approach saves time and effort in sourcing from the same supplier.

An economy that has been underperforming for quite some time, as is often the case in many poorer countries, cannot be expected to experience rapid improvements because many potential capacities have not had the opportunity to develop. Nevertheless, it still makes sense to implement the approach as soon as possible.

Lastly, as mentined earlier, the prices offered by local suppliers

may be higher than those offered by larger companies located outside the region. How this aligns with WTO regulations will be further explored in this chapter and in the chapters where local accounts are introduced 6 pages further.

These are "valid" reasons why procurement officers increasingly make purchases elsewhere over time. Unfortunately, this also leads to a self-reinforcing negative spiral: the less the anchors buy locally, the more the experience and knowledge of local suppliers decline, and the more expensive they become. Thus, the trend of reduced local activity becomes stronger and stronger, eventually almost forcing the anchors to buy outside the region.

Fortunately, the reverse is also true: if money is spent in the city, it can break this vicious circle, and the capacity of the local economy grows. Local suppliers then have a chance to recover and gradually improve their products, services, and prices. New local businesses have opportunities to take off. The growth of local companies generates much positive feedback. In the long run, this provides the community with more jobs, creates stronger social cohesion, a more substantial tax base, reduces transportation, and offers more prospects for the youth to secure proper local jobs. How did it work out in the case of Preston?

Involving the local anchor institutions in the project

The first phase of the project comprised three steps:

1. **Conduct an inventory to determine where local anchor institutions were spending their money and assess the feasibility of switching to local suppliers.**
2. **Identify and explore solutions to increase the visibility of local providers in the procurement practices of these anchor institutions.**
3. **Enhance local supply by assessing how to increase the capacity of the local economy to provide the necessary goods and services.**

Six anchors formed a group to support each other in their search for local suppliers. In addition to the procurement staff of Preston City Council, the team responsible for procurement in the neighboring municipality that joined the initiative, a police station, Preston's prominent social housing association, and two schools regularly convened. During these meetings, they provided mutual support and motivation to buy locally and sometimes even collaborated on joint efforts.

Derek Whyte, assistant director of Preston City Council, commented, "To be honest, I thought it was going to be a harder sell. I think we were helped by the fact that all our institutions have a very strong sense of place and community. I'm not sure it would be so easy to achieve that in a city like London."

The start of the Preston project

Before commencing the project, CLES conducted a baseline survey. This survey requested data from anchors regarding their purchases from their top 300 suppliers during the 2012/13 financial year. The survey aimed to address the following questions:

- **How many of those top 300 suppliers were located in Preston, and how many were situated in the rest of Lancashire County?**
- **How much money was spent in the local region?**
- **How was the spending divided between large, medium, and small businesses?**

The survey results provided a clear picture of the procurement practices of the six participating anchor institutions. Prior to the project's initiation, the anchors had allocated only 5% of their combined £750 million procurement budget to Preston and 34% to the rest of Lancashire County. This 39% figure revealed that a significant £458 million, or 61%, was leaking directly out of the Lancashire economy.

Preston City Council allocated just 14% of its budget to local businesses, whereas the national average for places like Preston was 31%. This illustrates the extent to which the negative spiral had already impacted Preston's social and economic fabric.

The earlier decline had become a vicious circle, and as the first companies disappeared, their suppliers followed suit. Such a negative spiral in the local economy could continue to the point where the anchors would be unable to buy locally, as entire sectors of local supply would have vanished. The baseline measurement thus motivated the anchors to make a genuine effort to reverse this vicious cycle.

CLES also examined which part of the expenditure was tied up in long-term contracts and when local purchases would be feasible again. The Preston City Council's case could redirect £3 million of the £8 million that was leaking out of Lancashire.

The project commenced by inviting local businesses to offer their goods and services to the anchors. These businesses also received assistance in effectively presenting their offerings to the buyers. Additionally, a publicity campaign was launched to engage the public in the project.

Preston's experience highlights that while agreements among the boards of anchors are helpful, the role of the procurement officers of the anchors is crucial. Much of the success stemmed from the formation of the Preston Procurement Practitioners Group, where procurement practitioners convened. This group fostered an environment that encouraged buyers to make extra efforts to seek out local suppliers.

Moreover, the Buy Local campaign in Preston was kept straightforward. The anchor institutions collaborated flexibly, sometimes as a group of four or six, but in pairs or threes for certain products or services. Procurement officers who had demonstrated their competence were trusted to carry out their work without imposing bureaucratic controls.

Early successes

CLES collaborated with Preston City Council to establish a database of local businesses to gain a better understanding of the diverse offerings of local companies. The City Council also reevaluated its spending and discovered more opportunities to buy locally than previously thought. The collaborating anchor institutions collectively possessed an estimated total purchasing power of over £1.2 billion per year.

Looking at the economy of Lancashire, including Preston, £488.7 million was spent locally there in 2016/17 – an increase of £200 million from before the project started in 2012. For example, the £1.6 million council food budget was awarded to local farmers, and the constabulary's £600,000 printing contract went to a Lancashire supplier (Lewis, 2017). In the five years since it started, spending with Preston-based suppliers has risen from 5% to 18.2%, and if you look at the whole of Lancashire, that percentage reached an unprecedented 79.2%! Unemployment has been reduced from 6.5% in 2014 to 3.1% in 2017 (the UK average in 2017 was 4.6%) (Manley and Whyman, 2021).

The Community Wealth Building Project also garnered interest from other local anchor institutions. For instance, the University of Central Lancashire (UCLAN) joined the program in 2015. Discussions are currently underway with local health organizations. This is a crucial development, given that hospitals in the region are the largest employers. Other neighboring municipalities were also invited to participate, and discussions were initiated with four additional housing corporations and educational institutions.

Contributing to sustainable and social values

Traditionally, procurement considers five key criteria: value for money, quality, reliability, responsiveness, and flexibility. The

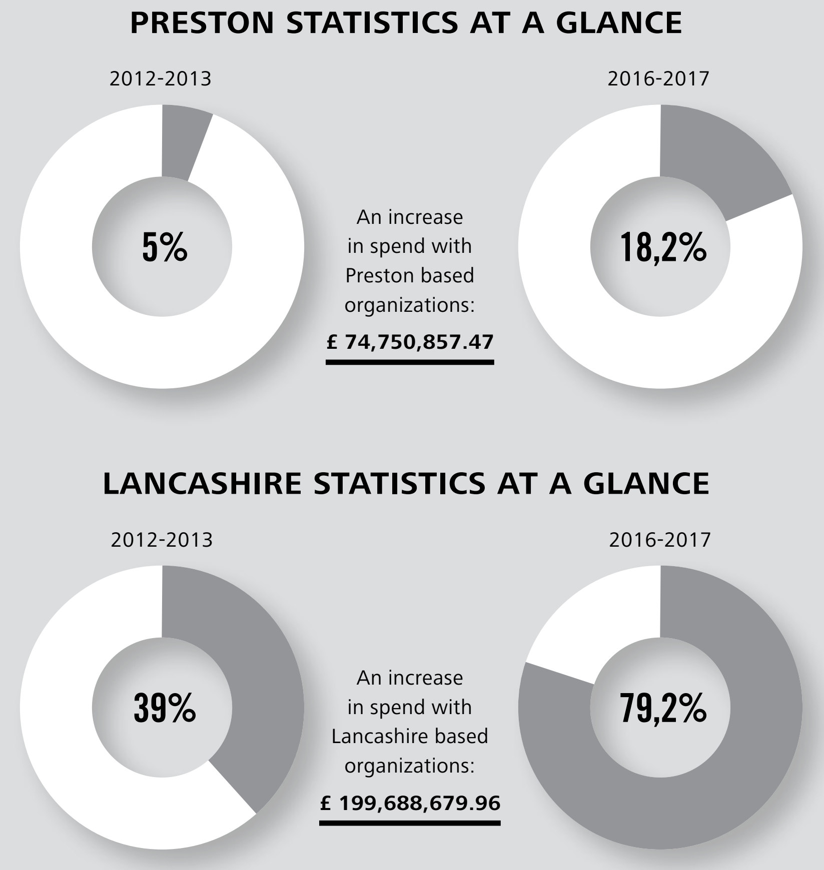

Figure 2.3
The data collected by CLES prove that it had been feasible for the anchors to switch to local suppliers in only a few years. The impact of this change of the procurement policy is felt some years later when Preston was elected as "best city for families to live in".

(Source: www.cles.org.uk/the-preston-model) anchor institutions developed procurement strategies that specifically consider local social values. This way, local procurement is increasingly becoming synonymous with "procuring in a socially responsible way". A framework for socially responsible procurement was adopted by Lancashire County Council in early 2016, focusing on the following:

- **Promoting local education**
- **Tackling unemployment**
- **Supporting the voluntary sector**
- **Reducing inequality and poverty**
- **Promoting sustainability to combat environmental degradation.**

Targeted local sourcing was found to have the effect of reducing poverty and promoting a more responsible use of resources. This indirect positive impact can justify buying from local suppliers, even in cases where the direct price of local purchases is higher.

According to the *Lancashire Post* Preston folk like to help each other. Preston topped the charts of the top 10 family-friendly towns and cities in the UK in 2023.

The increasing demand from politicians to account for the social impact of purchasing behavior is essentially new for anchor institutions. It can sometimes conflict with regulations that require open tendering. Fortunately, regulations are now shifting to allow municipalities to consider the social impact of their procurement, a shift embraced by many. For example, WTO regulations nowadays permit purchases to specifically benefit small and medium-sized local businesses and include broader economic, social, and environmental goals in public procurement (Tosoni, 2013; Koch, 2020).

Local investment via the local pension fund

The pension fund for civil servants in Lancashire was also addressed. Couldn't the fund invest the money more often within the community? The Lancashire Pension Fund had over £5.5 billion of investments outstanding. This money was primarily invested in foreign stocks. Incidentally, this type of investment often performs poorly, mainly due to high management costs. There is a growing interest within the pension fund to invest locally. Until recently, the fund focused on achieving the highest short-term financial return on investment. Nowadays, however, the social return on investment is taken more into account, leading to longer-term gains that often prove better in financial terms because they are less risky.

Approximately £200 million of the pension fund was reinvested in the regional economy. Part of this amount was invested in the construction of a campus, while another portion supported the renovation and reopening of the Royal Park Hotel. As pension fund managers typically prefer to invest no less than £10 million, Preston has now bundled smaller local investments to make them attractive as a combined investment for banks and pension funds. In doing so, Preston follows the example of many American cities where this approach has been successfully applied.

Conclusion

- Preston serves as an inspiring example of a community that prioritized its long-term interests and improved the local economy by procuring goods and services locally. This example challenges everyone to reconsider the assumption that the current organization of the economy is optimal.
- If a municipality and large urban institutions begin spending more locally, they can significantly impact the local economy and social fabric with minimal effort. Unfortunately, this approach is often overlooked by policymakers who focus solely on the short-term lowest price, neglecting the longer-term costs and benefits.
- Preston demonstrates how essential it is for local buyers and investors to be acutely aware of the opportunities that arise when they consider the potential return of local purchasing. While Preston's conditions may differ from those in many Eastern European, African, American, and Asian regions, local procurement can compensate for a relatively weak competitive position and strengthen the local economy. This holds true even in regions where local governments and anchor organizations have less to spend than in Preston.
- Implementing this successful Preston experience can be challenging in many Latin American countries, especially in small countries like Uruguay, Paraguay, Chile, and Ecuador, as well as in Argentina, where public anchor companies' purchases are entirely centralized through state offices that manage resources from the capital. Moreover, corruption often leaves no room for regional initiatives in Argentina or Peru. In these countries, it is first necessary to implement an administrative decentralization policy, including decentralization of purchases (Uruguay is already in that process), to then create awareness at the regional or city level of the capacity and freedom to implement policies tailored to their needs, promoting local development, such as buying local products and services.

- Another challenging aspect to consider is that small local companies are often expected to provide less favorable prospects for long-term warranty periods and a steady supply of spare parts. Typically, the state or a large company expects to pay more to secure long-term maintenance.

Next step

In this chapter, we learned about the actions anchor institutions can take to increase the impact of their direct spending. Consumers can follow this lead. The next step, which will be discussed in subsequent chapters, is as follows: Where will the local suppliers of the anchors themselves spend the earnings they received thanks to the buy-local initiative? Will they also prioritize local procurement, reinforcing the efforts of the local anchors, or will they spend that money elsewhere, allowing it to immediately leak away?

In the following chapter, we will explore how the Austrian city of Wörgl introduced a unique approach to prevent such leakage and ensure that companies that earned money thanks to local government spending also prioritize buying locally as much as possible.

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Chapter 3

How the City of Wörgl Revitalized its Economy through Enhanced Local Procurement

Introduction

Preston has demonstrated the significant benefits the local economy can derive when local institutions prioritize local procurement. While Preston serves as a success story, there is potential for even greater gains from local procurement with some adjustments. The key to this approach is extending the impact of local spending.

Prolonging the local circulation of money represents another avenue for stimulating the local economy in addition to increasing the frequency of local procurement by organizations focused on the long-term well-being of the community. Elevating this local circulation multiplier involves enabling the local government not only to choose to buy locally but also to influence where the money they spend will be utilized after the expenditure. Such an enhancement of the local multiplier holds particular significance for underperforming economies enduring prolonged periods of hardship.

This chapter will discuss the history of the Austrian town of Wörgl, a remarkable example of the substantial positive effects on employment and poverty reduction achieved through the extended local circulation of government expenditures (Schwarz, 1951; Lietaer, 1999; Goodwin, 2013).

Wörgl around 1930.

As we will explore in the next chapter, this example is not limited to economies in the global North. STRO has adapted its acquired knowledge for partners in Brazil who have benefited from the lessons drawn from Wörgl under vastly different circumstances.

The 1920's had witnessed a thriving economy with substantial investments, borrowing, spending, and consequent earnings. Money circulated smoothly, and expectations for the future were optimistic. However, in 1929, the stock markets crashed, leading to a reluctance to spend or invest. Company sales plummeted, and the economy descended into turmoil. The crisis extended its reach to even the most prosperous regions, resulting in the contraction of their spheres of influence. Companies had to downsize or shutter their operations, leading to widespread job losses.

The Great Depression inflicted unemployment, hunger, and despair upon the world. In Austria, the situation proved to be even more dire than in most other countries due to the collapse of the Austro-Hungarian Empire a decade earlier, resulting in the loss of numerous export markets. This rendered the economic depression of 1929 doubly severe within the country. After the initial years, people began to lose hope.

The same held true for the inhabitants of Wörgl, a small town nestled in the Austrian Alps. Desperation prevailed, and the political climate grew increasingly polarized. People found themselves unable to afford basic goods and services. Companies were laying off their employees, while others were forced into bankruptcy. With a growing number of individuals losing their jobs and income, there was even less money available for purchasing goods and services, further diminishing the prospects for surviving businesses.

Both citizens and businesses grappled with mounting tax arrears, placing a strain on the finances of the municipality of Wörgl. Consequently, the municipality's income dwindled steadily, necessitating reductions in its expenditures. Incidentally, the situation in Wörgl during that period bore striking similarities to the predicament faced by economically underperforming communities today. Money was in short supply, local businesses struggled to find buyers, and with local entrepreneurs earning meager incomes, their capacity to hire employees dwindled. This cycle of hardship left people without hope.

A courageous initiative that can serve as an example

In 1931, the people of Wörgl elected a new mayor with the wonderful name Michael Unterguggenberger. He was a member of the Socialist Party, but despite the intense polarization in Austria at that time, he commanded respect from across the political spectrum. Part of the reason for this was his wife, Rosa Schnaiter, a well-known businesswoman in Wörgl.

Unterguggenberger had made a promise during his campaign that if elected, he would take action to address the high unemployment in the city. However, upon assuming office, he discovered that the municipality's finances were in dire straits, with insufficient funds to carry out even basic tasks, let alone hire additional personnel. Through his marriage to Rosa, Michael was also keenly aware of the challenges entrepreneurs were facing due to sluggish sales. He was determined to find a solution to help them increase their income and stimulate the city's economy, enabling more job opportunities. The pressing question, of course, was "how?".

When Unterguggenberger took office in 1931, the crisis had persisted for three years, and the situation was worsening. It was evident to everyone that the problems were not caused by factors within the city but were a result of a global economy beyond their control. Furthermore, there was no indication of external assistance on the horizon. Consequently, Unterguggenberger devised a unique approach to improve the situation from within. To make this approach successful, he needed the cooperation of both cit-

Mayor Unterguggenberger.

A one Schilling voucher from Wörgl. On the right side there is space to stick stamps. One must be pasted every month for the voucher to retain its value as local money. The stamps not only provide additional income for the municipality, but at the same time encourage the recipients of the voucher money to quickly spend their earnings again.

izens and businesses. Fortunately, the dire circumstances made nearly everyone open to any alternative.

The core of the approach was to redirect the municipality's procurement efforts toward local suppliers and ensure that the money spent stayed within the community for a longer duration. The aim was to have money circulate as frequently and quickly as possible among local businesses and residents. With each circulation of money, someone would earn from it, and someone else would obtain a product or service. By increasing the frequency of money circulation in the city, more businesses would have opportunities to sell, and more individuals and companies could make a living.

To achieve this goal, Unterguggenberger came up with a brilliant idea: he decided to establish new rules governing the municipality's funds, directing them to benefit the city's economy. The approach he devised was as simple as it was effective:

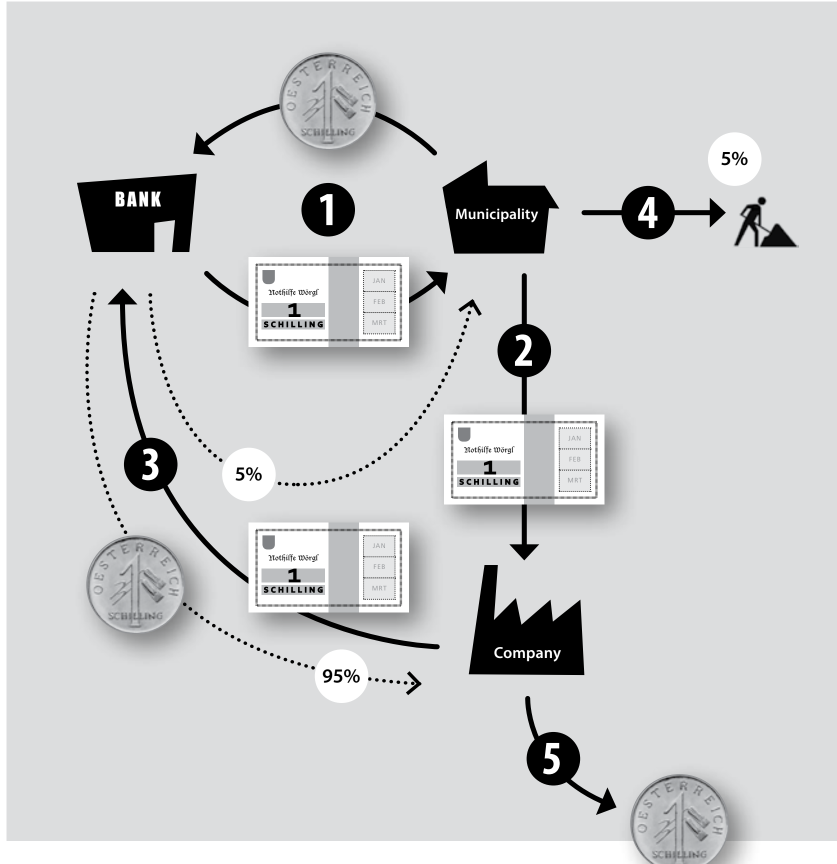
1. **The municipality transferred its shillings into an escrow account at the local Raiffeisenbank.**
2. **Vouchers of the same nominal value were printed.**
3. **The municipality used these vouchers to pay its suppliers, subsidies, and beneficiaries.**

These voucher cards effectively represented claims on the money held in the Raiffeisenbank. Anyone who possessed these vouchers could visit the bank and exchange them for schillings from the escrow account if necessary. However, the community was strongly encouraged to minimize exchanges and maximize local spending of the vouchers to boost local economic activity. Those who still chose to exchange vouchers could do so but were dissuaded by a 5% exchange fee levied for receiving schillings. It's unclear today why only a few individuals chose to cash their claims; perhaps the 5% loss deterred them, or perhaps they wished to contribute to the effort of strengthening the local economy. In any case, the majority of the money remained in the form of local vouchers for an extended period. This represented one-half of the municipality's endeavor to increase the circulation of the local medium of exchange.

The second component involved a special condition printed on the back of the vouchers. Each box displayed a future date, specifically the first day of each upcoming month. Anyone in possession of a voucher on that particular date was required to purchase a stamp and affix it to the voucher to maintain its value and make it exchangeable at the bank for schillings. The cost of such a stamp equated to one percent of the nominal value printed on the voucher. Only when all boxes for expired months had stamps affixed would the bank accept the claim for schillings from the escrow account. Therefore, these stamps functioned as a tax or fee on not spending the money, akin to a negative interest rate of 1% per month, incentivizing people to expend the vouchers they had earned as swiftly as possible.

The municipality deposited shillings into an account at the Raiffeisenbank and received an equivalent amount in voucher money in return. Subsequently, the municipality used these vouchers to pay its staff and suppliers, setting in motion the circulation of voucher money among local businesses, citizens, and the municipality.

At a certain point, a company might prefer shillings over vouchers, despite incurring a 5% loss. Consequently, the company exchanges the vouchers at the bank. Initially, the bank provides the company with 95% of the face value of the vouchers in Schillings, while sending the remaining 5% as profit to the municipality. The company spends the Schillings obtained outside of Wörgl. The municipality allocates the 5% profit toward community objectives, such as road maintenance, constructing a new bridge, building a ski jump, and so on. Subsequently, the city pays its workers with voucher money.



1) The municipality deposits Schilling on account at the Raiffeisenbank and receives the same amount in voucher money in return.

2) The municipality pays staff and suppliers with those vouchers. From then on, the vouchers circulate as a means to trade between local businesses, citizens and the municipality.

3) At some point, a company prefers Schilling to vouchers and is willing to take a 5% loss. The company turns in the vouchers to the bank. The bank compensates with a transfer of Schilling in the order of 95% of the face value of the vouchers and sends the 5% profit to the municipality.

4) The municipality spends the 5% profit on road maintenance, a new bridge, a ski jump, etc. Of course, it pays again with voucher money.

5) The company spends the Schilling outside of Wörgl.

Spending was the sole means to avoid the necessity of purchasing a stamp. Consequently, and likely because people were motivated to ensure the rapid circulation of voucher money, individuals spent their earnings swiftly. This aligns with Unterguggenberger's original prediction. By encouraging the rapid distribution of vouchers, more businesses would have opportunities to make sales, earn income, and spend the money again. Everyone comprehended that this would benefit local companies by boosting sales and citizens by creating job opportunities. Thus, it was preferable to spend earnings promptly. This is precisely what occurred. Individuals hoarded regular schillings, resulting in economic despair for the community, up till the moment the introduction of stamps imposed a cost for hoarding that aligned individual interests with societal interests.

Historical records indicate that both companies and individuals expended the vouchers they earned rapidly. Since businesses from other cities had no incentive to accept Wörgl-vouchers as payment, they were exclusively used within Wörgl. Consequently, purchasing power continued to circulate rapidly within the city, leading to increased economic activity and significantly improving the city's economic situation.

Incidentally, the concept of a levy on leaving money unused did not originate with Unterguggenberger but was the brainchild of the economist and businessman Silvio Gesell. In his book, *The Natural Economic Order*, Gesell proposed the introduction of negative interest as the ultimate solution to combat economic crises and prevent the transfer of wealth from those with limited means to those with abundant wealth. Unterguggenberger, however, devised the brilliant strategy of substituting Austrian Schillings with vouchers, enabling the municipality to implement negative interest as a catalyst for local money circulation without the need for central authority intervention.

The miracle of Wörgl: the invention of a local payment system

Mayor Unterguggenberger initiated the establishment of a local payment network centered around the Austrian schilling, an ambitious endeavor indeed. To garner support for this project, Unterguggenberger initially focused on convincing the city council. Subsequently, he organized meetings with representatives from the business community and the general population. It was only after he had successfully convinced a sufficient number of individuals about the viability of this approach that he began depositing public funds into the dedicated account at the local Raiffeisenbank and commenced the printing of vouchers.

Initially, many people were hesitant to accept the vouchers, with some even labeling them as counterfeit money. However, skepticism began to dissipate when Unterguggenberger's wife's company began accepting the vouchers as a form of payment. This served as a signal to other businesses that the voucher money could be trusted.

The city heavily invested in disseminating the idea to the public, with the bank manager confirming the availability of shillings to back the vouchers. Even the local priest, despite not being a supporter of the Socialist Party, endorsed the mayor's initiative. All of these factors were significant. However, it is suspected that the ultimate decision-maker was the fact that accepting the vouchers was the sole means for companies to generate income. Companies that declined to accept the vouchers would simply fail to make any sales, resulting in the burden of unsold inventory costs. Most businesses found themselves in a situation where they had nothing to lose. When it became evident that the local bank did indeed exchange vouchers for Schillings, even the staunchest skeptics gained confidence in the vouchers' value.

Given that the vouchers could only be utilized to remunerate employees, pay for goods and services at local businesses, or fulfill tax obligations to the municipality, the money remained within the local economy. Furthermore, it was common knowledge that once individuals received vouchers, it was in their best interest to expend them as promptly as possible. Consequently, the introduction of vouchers spurred a concerted effort to stimulate the local economy, with everyone actively supporting this new policy and assisting local businesses in generating revenue, which in turn allowed them to rehire staff.

No one was fond of paying the 1% fee, but for businesses, it made more sense to accept the vouchers than to lose customers or earn nothing. Exchanging the vouchers for Schillings appeared impractical as the cost of this exchange was five times the monthly amount of a stamp. Thus, the decision to buy locally was not only an act of community spirit but also one of pure self-interest. Moreover, it was widely recognized that exchanging vouchers for Schillings deprived local businesses of the opportunity to enhance the local economy. Consequently, any business that acquired local money coupons and promptly sought to exchange them for Schillings was regarded as undermining the collective effort to boost the local economy. As a result, even those who preferred not to be compensated in vouchers accepted them and spent them as swiftly as possible.

Enabling more frequent use of locally spent money

In Preston's example, anchor institutions procure more often from local suppliers, thus spending their money locally at least once. After that, this money could very well leave the city. The approach developed by Unterguggenberger ensured that this money, that purchasing power, was programmed to be used more often in the city, strengthening the impact of the money spent. The cost of the stamps activated additional local production for local consumption, facilitated by the underuse of local capabilities.

In reality, the vouchers distributed by the city were often used to pay debts to the city's tax office, while another part enabled additional purchases. The extra income the city received because of the reduction of outstanding invoices enabled the government to spend more (vouchers). Part of this generated extra sales enabled many local entrepreneurs to sell some of their unused capacity. Next, that voucher income was partly spent to buy unused capacity from other businesses. The stamps ensured rapid circulation of "voucher money", creating a win-win situation: the money you spent could be used by someone else. At some later moment, the vouchers could even be returned to the original business. During the two years vouchers were used, unemployment in Wörgl decreased by as much as twenty-five percent, while unemployment continued to rise throughout Austria!

Additional income for the municipality to spend

The municipality also benefited from the revival of the local economy. Tax debts were being paid, and the additional economic activities brought in extra revenues. Meanwhile, the voucher program generated additional income thanks to the sale of the stamps and the 5% exchange fee. Those additional revenues were spent again by the municipality almost immediately. Within two years of the introduction of the vouchers, the city had managed to spend money on:

- **Connecting all houses in the city to the drinking water network**
- **Performing all the necessary street maintenance**
- **Building a new bridge**
- **Constructing a new ski jump**

The citizens spent their additional earnings on, among other things, the maintenance of their homes. All in all, the progress was such that the international press described it as: "das Wunder von Wörgl" – the Miracle of Wörgl.

Quick utilization of vouchers

As mentioned earlier, the residents of Wörgl made concerted efforts to spend their voucher income as soon as they received it, partly due to the impending stamp costs. However, this was likely not the sole reason, as it was discovered that the municipality earned five times the amount of vouchers spent in circulation on the first day. How was this possible?

This suggests that the municipality had received payments with those vouchers at least four times on that same day! Clearly, many companies had outstanding debts and saw the vouchers they earned as an opportunity to settle those debts. It also reflects the community's dedication to ensuring the success of this collective effort. Imagine the experience of the municipal officials who had to immediately allocate the funds that came into the municipality on the day of issuance. Vouchers issued early in the morning were likely returned within hours. Many individuals and businesses probably settled their municipal tax debts right away, prompting City Hall officials to reissue vouchers without delay. This must have been well-planned. At times, the municipality employed the voucher money that had just been received to compensate the unemployed and instruct them to enhance community facilities. Additional goods and services were procured from local businesses. The extra revenue from stamps and exchange fees provided the city with the means to allocate funds for projects that had not been budgeted for previously. Everyone embraced the idea of spending the voucher money as soon as they earned it.

No one hoarded the voucher receipts for fear of future uncertainties. If the situation had not been so dire, it could be likened to a communal challenge designed to secure a place in the Guinness Book of Records for the most times the same money could be spent within a month. Everyone was committed to turning that record into a reality. On the very first day alone, 1,000 Schillings

generated as much as 5,000 Schillings in spending money for the municipality. Citizens and businesses also gained at least 4,000 Schillings in revenue. Assuming that the vouchers circulated among firms on that memorable first day, considerably more than 4,000 Schillings must have been earned.

The Cost of the Stamps as an Avoidable Commission

The objective is to accelerate the circulation of money to a level where it engages potential individuals and companies while discouraging hoarding or idle usage. Another argument in favor of this approach is that it levels the playing field between individuals and funds with excess capital and companies seeking investment. Non-usage incurs a charge on earnings, which in Wörgl was represented by the cost of stamps. Various terms are employed to describe this concept, including stamp charges, negative interest, commission on earnings, circulation charge, or circulation accelerator. Money subjected to this mechanism is often referred to as "rusting money" or "natural money" because it adheres to the principles of natural phenomena, diminishing over time, much like many natural substances.

I prefer the term "avoidable commission" on earnings because it clarifies that you only incur charges when you generate income locally. This commission can largely be avoided by expending money promptly. Money that is spent rapidly is more likely to generate additional revenue, as the pressure to spend quickly results in its more frequent usage and eventual return as income. Furthermore, one can evade commission fees by spending locally earned money with others. In doing so, the recipient accrues additional earnings and takes on the role of the commission payer.

The new bridge under construction
as part of the *Miracle of Wörgl*.

Lastly, in German texts, you may come across the term “Freigeld” *(Free money)*. This term denotes how this form of currency can emancipate humanity from the influence of money and interest.

The municipality of Wörgl compensated workers using the proceeds from the stamps. Initially, when we learned about Wörgl, we believed that the swift circulation was primarily due to the stamps that residents had to affix at the end of each month. It was only later that we realized the extent of the collective effort that must have been involved.

What would have occurred in Preston if the anchor institutions had paid using a similar locally created pound sterling? Would that currency also have been spent multiple times within the local community? What additional impact would it have had on the local economy? How much extra revenue would it have generated for the community?

Due to copycats, the central bank intervenes

Wörgl became a showcase illustrating what can be achieved when purchasing power circulates more rapidly and frequently within a community. This is particularly crucial for communities grappling with a crisis or suffering from an underperforming economy. In the 1930’s, this was already evident within two years. As previously mentioned, even the international press covered it as if it were a miracle. The news even reached the United States, where the renowned economist Irving Fisher became aware of it. Fisher examined the example, became highly enthusiastic, and commenced advocating for local voucher currencies in the U.S. as a means to combat the depression. Fisher recognized that creating a local medium of exchange combined with a levy on not spending that currency was an effective method for revitalizing business sales.

Naturally, the miracle in Austria attracted much attention. Soon, over two hundred Austrian municipalities began preparing to replicate Wörgl's model. Unfortunately, this triggered alarm bells at the Central Bank of Austria. In the 1930's, central banks still harbored deep-seated fears of hyperinflation. This fear was not unfounded, given the severe hyperinflation experienced by Austria and Germany in the previous decade. In Germany, for instance, inflation had soared to the point where an ordinary stamp cost 50 billion Reichsmarks by 1923. While this hyperinflation was ultimately resolved with the introduction of a new currency, the Goldmark, the trauma of hyperinflation continued to shape opinions at the Central Bank. Austria had also grappled with hyperinflation, which was curtailed by the introduction of the Schilling, replacing the Koruna by early 1925. It is conceivable that central bankers would vehemently oppose any initiative that they did not control.

In light of this experience, monetary authorities were primarily preoccupied with curtailing money supply and circulation, exacerbating the depression. Consequently, when the Central Bank learned that 200 municipalities had commenced printing local vouchers, they feared losing control. What if these cities succumbed to the temptation and issued more vouchers than there were Schillings in the bank? As a result, the Central Bank exercised its legal monopoly on currency issuance and labeled the vouchers as an encroachment upon that monopoly. This unequivocally encompassed the vouchers in Wörgl. Unterguggenberger faced a choice: abandon the projects or face imprisonment, which would also spell the end of his initiative. And so, the Miracle of Wörgl concluded on the first day of September in 1933. The hopes and prospects raised by the initiative gradually waned, and more and more people turned to the Nazis, who promised them a way out of the crisis.

If this had transpired in the digital payment era, Raiffeisenbank could have opened local accounts, and the monopoly on printed money would not have been infringed.

A local payment environment

A local payment ecosystem that reprograms the national currency can employ various mediums, such as local voucher claims or digital accounts. Essentially, it transforms existing money into a medium that channels its purchasing power toward a specific community, where it circulates more frequently, thereby stimulating increased local production and additional income. This medium imparts a local purpose to the existing money. The result of enhanced circulation within the community is that money spent by someone today may return as income at a later time. Consequently, this medium is often referred to as local money.

The newly generated activities will primarily revolve around services, as local money cannot be utilized to import raw materials or fossil fuels. The constrained usability of local money compels the economy to adopt a more circular approach. Therefore, the local payment ecosystem encourages money to circulate more extensively and bolsters the concept of a circular economy. Hence, this local medium is also termed circular money.

The mayor's brilliant idea

In order to initiate such a project successfully, the volume of money converted into the local means of exchange must be substantial enough to pique the interest of a variety of businesses, enticing them to participate and offer their products or services. This depends on the alternatives available to these businesses for making sales, or more precisely, the limited options combined with the (comparative) volume of money channeled into the local payment mechanism. In regions grappling with high unemployment rates, businesses often find motivation to participate and sell their goods or services. Governments and their suppliers should possess the ability to encourage their second-tier suppliers to accept payments (either in full or in part) using the local payment method.

In this digital era, the utilization of vouchers becomes increasingly unlikely as a form of currency, while the creation of a digital local account, seamlessly connected to similar accounts, is relatively straightforward. A heightened circulation of government expenditures can serve as a potent catalyst for the local economy. Increased money circulation effectively boosts domestic production geared towards local consumers. In most regions, such locally-targeted production, aimed at satisfying the needs of the local market, can result in improved housing, a more attractive and better-maintained urban environment, healthier locally-sourced food, enhanced educational opportunities, and greater energy efficiency within the community. A robust local economy serves as a fundamental prerequisite for engaging in more favorable trade relationships with other regions.

Conclusion

The extraordinary results of the Miracle of Wörgl can be attributed to the following factors:

- Economic circumstances that resulted in unused capacity in most companies, an economy where spending was discouraged, and widespread unemployment. In such circumstances, people and businesses tend to save rather than spend their earnings.
- The realization among the people that the underperformance of the economy was not their fault, leading to a transformation of frustration into positive energy in Wörgl.
- The commitment of the population to collectively combat the crisis by accepting local currency and promptly spending it at other local businesses.
- Mayor Unterguggenberger's deep understanding of the nature of the crisis, recognizing that local businesses were experiencing reduced sales due to money hoarding, which disrupted the natural cycle of production, sales, and salary payments.

- The mayor's ingenious idea to establish a local payment system based on the national currency, enabling the creation of a unique form of money with novel rules.
- The implementation of specific rules, including negative interest in the form of the a 5% fee for converting the local money back into Schillings, which introduced a micro exchange rate, and the monthly 1% fee for stamps that incentivized both individuals and businesses to spend their earnings quickly. The income generated from these fees was reinvested in creating jobs for the unemployed, funding street maintenance, constructing a new bridge, and building a ski jump. The visible improvements in the city were immediately apparent to everyone.
- By combining the principles of Wörgl with Preston's commitment to local purchasing, it is possible to strengthen the local economy by:
  – Encouraging anchor institutions, businesses, and consumers to prioritize local purchases whenever possible.
  – Implementing a local payment network to ensure that the community can benefit from this local spending more frequently, thus preventing money from flowing out to other regions or countries.

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In addition to these references, the content of the present chapter also results from many discussions, from the Unterguggenberger Institut information, and from the movie *Der Geldmacher* from 2018.

Chapter 4

Fomento: How Donor Money's Impact in a Favela was Amplified

Introduction

Despite the severe budget cuts that the city of Preston had to endure, the buy-local campaign managed to succeed due to the availability of funds from the government and local anchor organizations. In the case of Wörgl, the city initially had very limited resources but possessed tax claims on its residents. However, what happens when there are no expectations from the local government or anchor institutions? What if they lack financial resources or interest in an extremely impoverished neighborhood? Do the approaches highlighted in the preceding chapters remain relevant to the global South or to regions in the US and Europe where the local economy is in a dire state?

These questions formed the core of STRO's project proposal for a neighborhood organization in Conjunto Palmeira. Conjunto Palmeira is a favela/slum in Fortaleza, a city with 2.7 million inhabitants located in the Northeast of Brazil. Most of Conjunto Palmeira's 32,000 residents originated from a nearby fishing village that a property developer evicted during the Brazilian dictatorship in the 1970's. In search of a new place to live, these refugees found a plot of land in the vicinity of Fortaleza. This plot, situated near a river, was frequently subject to flooding and remained unused. The refugees occupied the area, collaborated to construct dikes and drainage systems to control the floods, and commenced building houses and structures using various materials, some purchased, and some salvaged from the garbage.

As they were displaced from the sea, which had been their source of livelihood, most residents encountered challenges in finding new income sources. Consequently, there were very few local businesses within the community, and the majority of goods and services were acquired from external sources.

Several years later, a neighborhood committee was formed, initiating Banco Palmas. Banco Palmas was not a formal bank but rather a micro-credit institution with the aim of establishing social enterprises, boosting employment, and serving as an intermediary to facilitate microcredit loans for local businesses. From the outset, the individuals working at Banco Palmas had a vision to holistically enhance the local economy. They received funding from a French donor to support a microcredit program for small local businesses. The Banco Palmas staff recognized the challenges these new companies faced in acquiring clients. To assist them, Banco Palmas introduced an innovative solution: a local credit card for consumers that could only be utilized at businesses that had received microcredit from Banco Palmas.

The economies of Preston and Wörgl had contracted in recent years. That was not the case in Conjunto Palmeira, where businesses had always lacked customers. When STRO became involved, we drew inspiration from the Wörgl experience. Conjunto Palmeira required more financial resources and the improved circulation of money, mirroring the successful approach undertaken in Wörgl.

How STRO got involved

The local credit card wasn't the sole innovation of Banco Palmas. They also introduced a local currency called *Palmeiras*. This initiative brought them into contact with Heloisa Primavera,

a Brazil-born Argentinian woman who had played a key role in organizing local barter clubs that helped millions of Argentinians survive the 1999/2000 Pesos crisis.

In 2002, Heloisa organized a conference in Santiago de Chile, focusing on the contributions of new forms of money and exchanges to social and economic growth. She invited individuals who were innovating in these areas, including STRO and Banco Palmas. As we sat in the courtyard of the conference center, with snow-covered mountains in the distance, we were tempted to spend our free weekend exploring these peaks. We were joined by Sandra Magalhaes, the representative of Banco Palmas, and Ruth Espinola, who worked in Rio. Like many Brazilians, Sandra had never encountered snow and was eager to explore the mountains as well.

During the drive to the mountains, Sandra shared the activities of Banco Palmas, including the story of Palmeiras – the local vouchers introduced two years prior. Despite a promising start, this local currency had stagnated and was being used less and less, although the exact reasons remained unclear to the Banco Palmas team.

Upon learning of our specialization in local payment systems, Sandra inquired if we could assist in revitalizing the Palmeiras. Intrigued by the conditions she described, we agreed to give it a try. A few months later, a STRO-team visited Banco Palmas and met with a team of pleasant, intelligent, enthusiastic, and pioneering organizers. Sandra and her colleagues Joao Joaquin de Melo Neto and Jacqueline Dutra, had quite some experience with organizing locally, and shared out objective to introduce a tool that would enhance trading opportunities among the neighborhood residents. Regrettably, Palmeiras had failed to achieve this. Our task was to analyze what went wrong with Palmeiras and, more importantly, determine how to make the local currency work effectively for the community.

Based on our experience, it wasn't difficult to identify why their local currency initiative had faltered. At a certain point, people wanted to spend more Palmeiras than local individuals and businesses were willing to earn. At this juncture, trust eroded, making it increasingly challenging to spend the local currency. This loss of confidence undermined the local currency's viability, causing it to be used even less. This outcome diverged from the community's initial expectations, resulting in disappointment and a perception that local money was ineffective. Such sentiment posed a challenge should Banco Palmas attempt to revive the local currency. How could this dilemma be resolved?

We concurred that the situation necessitated Banco Palmas to discontinue the Palmeiras. One should never work with a tarnished reputation. However, the process had to be executed in a way that would restore trust. Fortunately, only a limited number of Palmeiras remained in circulation. This enabled Banco Palmas to repurchase the remaining vouchers at a one-to-one exchange rate with the Brazilian Real, costing less than 10,000 reais (reais is the plurial for real). This ensured that nobody felt victimized by the Palmeiras initiative.

Strategic considerations for the new local currency

Banco Palmas required a redesigned local currency distinct from the Palmeiras, one that would function more effectively. A new name was needed: Palmas. Initially, our focus was on motivating people in the neighborhood to actively earn Palmas. We discussed two options with the team to instill trust in the new local currency:

- **Making Palmas convertible to Reals (the national currency).**
- **Creating a situation where people could spend more Palmas than they earned, contingent on sufficient businesses being interested in earning Palmas.**

The most robust strategy would incorporate both options. We anticipated that individuals would opt for conversion immediately if allowed, leading to the local money quickly leaving into the reais circulation. This would occur long before it could facilitate additional transactions or economic activity, the primary purpose for which the local currency was introduced. However, there were various methods to minimize conversions, such as implementing a waiting period or a waiting list to restrict the timing or amount of money that could be converted. Alternatively, the right to convert could be limited to specific businesses active at the end of the production chain. In all these scenarios, the local money would feel equivalent to the official Brazilian currency.

Ultimately, we selected a strategy that we believed would create a situation where the demand for Palmas exceeded the volume of Palmas actually in circulation. We expected that this would instill confidence in the value of the local currency.

Banco Palmas proved to be the ideal partner for this endeavor. Moreover, they were established by the neighborhood committee and possessed a unique and effective mode of communication. Joao Joaquim de Mello Neto had the ability to inspire people, while Sandra Joaquin Magalhães ensured steady organization.

The option to repay debts in the local currency

We proposed the acceptance of the new Palmas currency for debt repayments associated with the micro-credits extended to local businesses by Banco Palmas. The concept was that allowing the settlement of these debts with Palmas would create substantial demand for Palmas from a diverse range of businesses, fostering trust in the inherent value of Palmas. Our expectation was that when businesses had the choice to use Palmas to settle their loans, they would regard Palmas as genuine currency. This approach would establish the value of Palmas on par with Reals and differentiate it from the Palmeiras.

However, if Banco Palmas permitted repayments with Palmas, these would not be made in Reals, potentially reducing their capital in the revolving fund. In essence, the question arose: from where could Banco Palmas procure the Reals to support the initial issuance of Palmas?

It was imperative to introduce a quantity of Palmas whose value was less than the expected Reals to be repaid to Banco Palmas in that particular month. In economic terms, the demand for money to repay Banco Palmas needed to exceed the supply of Palmas available in the market. The introduction had to be gradual, and the total Palmas volume should never become too substantial, representing only a portion of the micro-credits Banco Palmas extended in the neighborhood. This was critical because it ensured that people would perceive Palmas as having the same value as Reals.

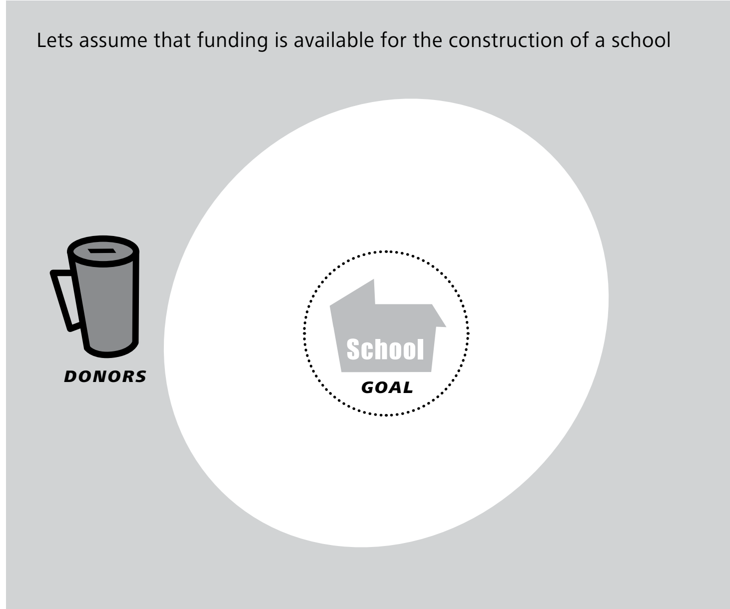
Fomento methodology

The project's central focus was to enhance the neighborhood's economy by expanding the available means of exchange to facilitate production, trade, and consumption. While preparing the project, a name had to be selected. A local priest suggested naming it "Fomento", which carried various meanings, including promoting the local economy, bringing people together, and stimulating progress.

The Fomento approach encompassed the following steps:

1) Allocation of donor funds as microloans

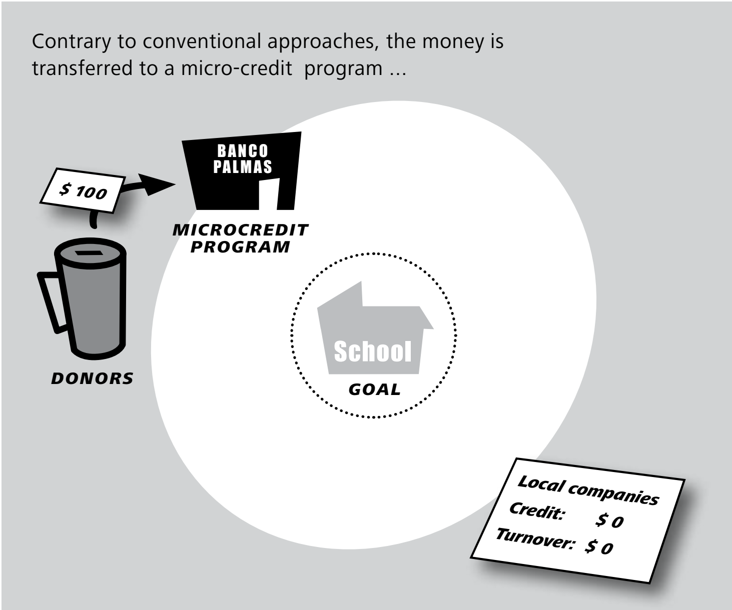
To replicate the Wörgl model, we needed actual money that could be temporarily converted into Palmas vouchers. Our search for such funds led us to identify a neighborhood project that might attract a donor's interest. We found that the community required the construction of a classroom, which we considered an ideal



starting point to raise funds. We anticipated that such a project would resonate with a potential donor, convincing them that their contribution would not only benefit the school construction but also serve as the launchpad for the new local currency. This dual purpose would provide substantial support to the local currency. STRO approached the Dutch development organization ICCO and requested their financial assistance for the classroom's construction in the neighborhood. ICCO agreed to provide the necessary funding for the construction, which, at that point, was a routine procedure.

2) Donor money to construct a school

Rather than immediately using the funds for constructing the school, we approached ICCO with a request to place trust in our assurance that the classroom's construction would indeed proceed, albeit on a slightly delayed schedule. This arrangement enabled us to utilize the funds for other purposes in the interim, with

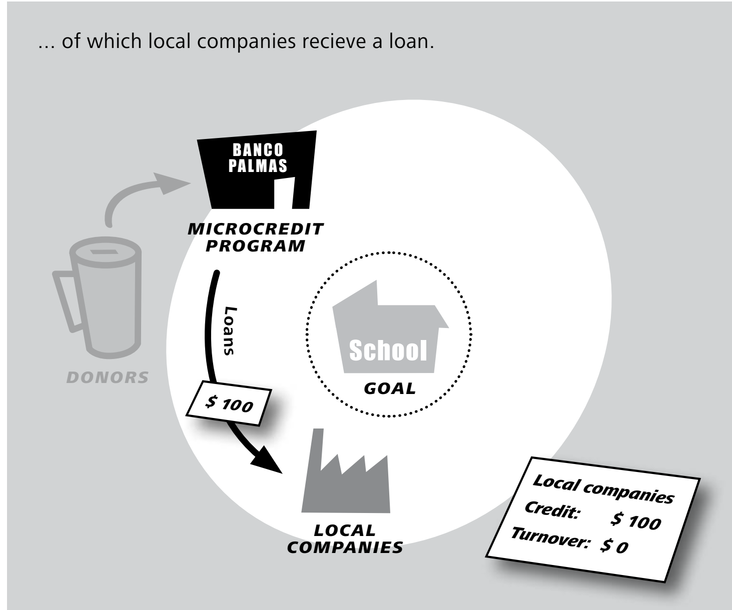


a specific focus on introducing Palmas. Therefore, instead of following the traditional grant usage path, where the money would be earmarked for the school's construction, Banco Palmas was entrusted with the task of allocating the majority of the donor funds to expand their micro-credit loan program. They were also to extend supplementary loans within the neighborhood, denominated in the Brazilian currency, the Real.

Given that these loans were denominated in Reals, only a portion of the funds was spent within the neighborhood.

3) Banco Palmas' communication with local businesses

Subsequently, Banco Palmas initiated communication with all local businesses that had received micro-loans, informing them that they would be willing to accept Palmas as a form of payment if customers could acquire it. This applied not only to clients who had received the new loans financed by ICCO funds but to all clients of their micro-credit program.



This announcement presented a unique challenge as "Palmas" had not yet entered circulation and was unfamiliar to the local businesses. Nonetheless, Banco Palmas requested these clients to affix a sticker to their doors, indicating their willingness to accept Palmas. Given the friendly nature of Brazilians, most business owners complied with this request. Their participation carried no risk, as they could utilize these, as yet enigmatic, Palmas for repaying Banco Palmas.

Later, during evaluation interviews, business owners were asked what they had thought when they were requested to announce that they would accept Palmas, "Maybe I will never get such a Palmas, but if I do, I can accept them, no problem, because I can use them to repay Banco Palmas."

The result of these stickers was that demand came into existence, even before anybody had touched a Palmas voucher. This was quite different from the old local currency, the Palmeiras, where there was more offer than demand.

4) Official launch and campaign

Banco Palmas proceeded to organize meetings to officially introduce the Palmas currency. Many individuals had already noticed the stickers displayed in store windows. In their communication campaign, Banco Palmas emphasized the advantages of using Palmas for the community: it would stimulate the creation of more economic opportunities and jobs. The message conveyed was clear: utilize Palmas as frequently as possible to boost sales, increase your business income, and then reinvest the money locally, enabling others to make additional sales. The campaign encouraged using Palmas to repay debts, albeit preferably at a later date than sooner.

The number of small businesses displaying a Palmas sticker on their windows grew. Surprisingly, several of these businesses did not have loans from Banco Palmas. Still, they requested stickers to demonstrate their commitment to the neighborhood's development. They were eager to accept Palmas in support of the community and had faith in the option to spend the Palmas they earned at other businesses displaying the sticker.

Over time, more and more community members grasped the concept that using Palmas (alongside the national currency) would benefit the entire area due to the increased trade it facilitated. In a survey, individuals proudly declared, "I live in the neighborhood where we have our own bank." It's important to emphasize that the residents of the neighborhood had actively participated in establishing the Banco Palmas NGO. In such a grassroots initiative, people didn't need to wait for government intervention (as in Preston) or the mayor's actions (as in Wörgl) to come to their aid. They had taken the initiative to create their own "bank" with initial support from donor money.

5) Printing of Palmas Vouchers

STRO persuaded Heloisa Primavera, who initially connected Banco Palmas with STRO, to assist in introducing the Palmas.

A Palmas-Voucher of 50 cent

Heloisa combined her expertise in Argentina's Trueques currency with Banco Palmas' team. Leveraging her contacts in Argentina, she arranged for the printing of Palmas vouchers, which were then delivered to the Banco Palmas office, marking a significant milestone. However, there remained the task of fulfilling the commitment to the donor: the construction of the school.

6) Finding a constructor willing to accept Palmas for building a local school

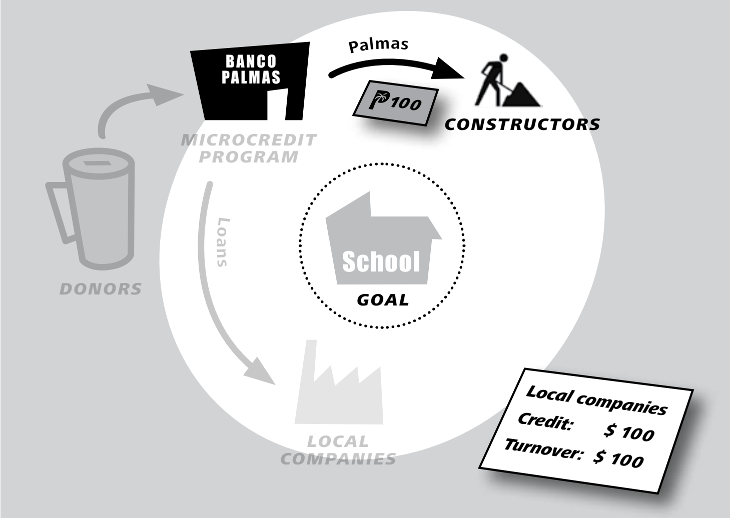
Banco Palmas initiated a tender process to solicit bids from potential constructors for the school's construction project. An essential requirement was that prospective candidates must be willing to accept the majority of their payment in Palmas. Only offers agreeing to receive payment in Palmas were considered and evaluated as potential candidates.

Interested constructors began to contemplate the feasibility of working with Palmas. The knowledge that most local businesses had already declared their willingness to accept Palmas boosted their confidence. They believed that if they paid their workers in Palmas, the currency would be readily spent within the community. Moreover, the fact that the hired workforce resided in the same community and held trust in Banco Palmas further reinforced their confidence.

Ultimately, it was proven that the school could indeed be constructed with 87% of the payment in Palmas. The remaining 13% was disbursed in the national currency to cover essential purchases outside the community that couldn't be sourced locally.

Hiring workers from the district and predominantly compensating them in Palmas didn't present any issues. However, the acquisition of building materials from outside the community posed a challenge. To address this, Banco Palmas sought out a construction company involved in other projects within the district. While typically, at least half of the construction costs would

Backed by the claims on repayment of the microcredits Banco Palmas issued Palmas vouchers at the same value. The constructor accepted these Palmas as payment for the construction of the school.

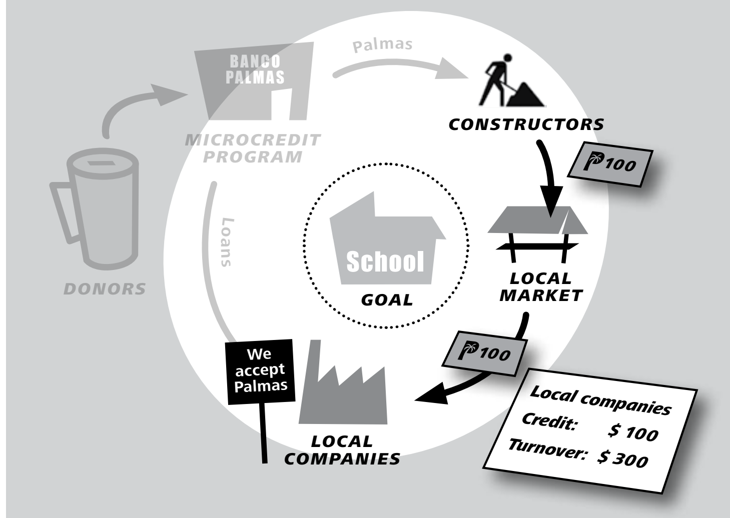


be allocated to materials not produced in the favela, the decision to remunerate the workers who also worked on different projects partially in Palmas enabled the construction company to save reals on their overall expenses, which were then redirected to procure materials for the school.

7) Local circulation

During the construction, the contractor compensated the workers with Palmas throughout the construction period. These workers promptly spent their earnings at local businesses displaying the Palmas sticker on their windows. Some of these businesses had no outstanding debts with Banco Palmas and had affixed the sticker to attract customers and support the local economy. This practice significantly contributed to the further circulation of Palmas within the community. Consequently, Palmas found its way into businesses that repaid their microcredit loans to Banco

The constructor spends the Palmas it earned in the local market. Via via these Palmas find their way to local companies that repaid their debt at Banco Palmas using these Palmas.



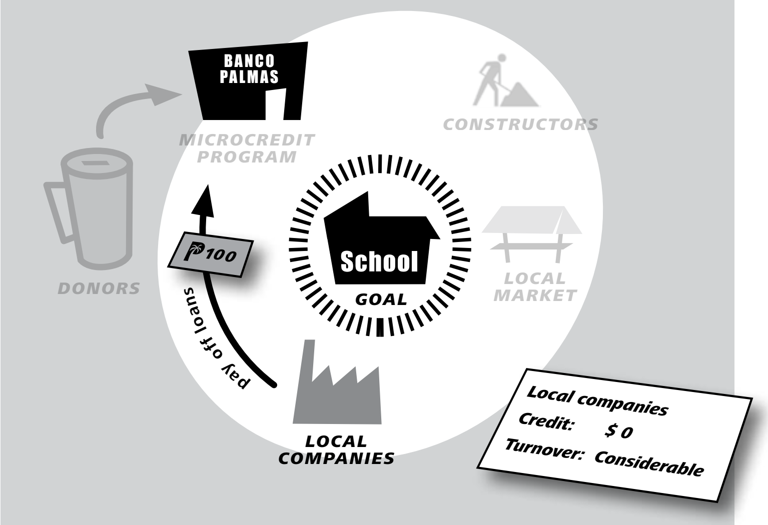
Palmas using Palmas. When they earned more Palmas than they were required to repay, they utilized the surplus to make purchases at other businesses displaying the sticker. All these additional transactions served to amplify the circulation of money within the neighborhood, leading to increased economic activities.

8) **Completion of the school**

As promised to ICCO and the community, the classroom was eventually constructed. Subsequently, at a later stage, all Palmas payments made to the contractor had returned to the Banco Palmas office. This money, in addition to funding the construction, facilitated the provision of further microcredits and had circulated multiple times within the neighborhood.

In total, the Palmas currency generated more economic activity than what would have occurred if the school construction had followed a conventional approach. Furthermore, Palmas had

The school is completed. Finally, all Palmas payments returned to the Banco Palmas, including the loans.



gained significant trust within the community, enabling the issuance of new microcredits, with a portion (20-30% of most credits provided) now being offered in the Palmas vouchers that had previously circulated back to Banco Palmas. This money no longer needed to incentivize savings.

Conclusion and results

The University of Bahia conducted research on the project, confirming that only a small portion of the local currency paid to construction workers directly reached businesses with debts at Banco Palmas. Most Palmas circulated within the community before being earned by companies that utilized them to repay their microcredit. Due to the nature of Palmas as script vouchers, it was not possible to calculate a precise multiplier. Nevertheless, the University of Bahia estimated that, on average, one Palmas was involved in at least three transactions before being used for microcredit repayment. This level of circulation was exceptionally high in neighborhoods with a high poverty level. Researchers from the University of Bahia concluded that the area had generated at least 15% more economic activity (Torres, 2004).

Employing the Fomento method, the donor money generated at least three times as much local economic activity as would have occurred if it had been directly allocated to the school's construction. It resulted in the construction of the new school while also bolstering the neighborhood's economy through additional microcredit loans, further facilitating trade.

Several studies have demonstrated the impact of cash transfers on local economies, economic security, and activities, particularly in situations where traditional forms of social security are absent or have collapsed. Research conducted by the Brazilian IPEA institute on the effects of Bolsa Família, the conditional cash transfer program in Brazil, reveals that these cash transfers are primarily used for regional food and housing, thereby stimulating significant local economic potential. In Ethiopia, the Cash for Relief Program empowers households affected by crop failure to rebuild essential infrastructure required to sustain their communities, rather than being consumed as in food aid programs (Standing, 2007; Thome et al., 2016).

The Bahia research did not focus on the rates of loan repayment at Banco Palmas. However, Banco Palmas indicated that default levels had been lower and attributed this in part to the extended options for sales and earnings due to the increased availability of money. This outcome exceeded the expectations of the STRO team and inspired the development of software to implement the Fomento method on a larger scale in other communities where limited access to money hindered development. The goal was to prevent money from leaving the community prematurely.

What happened next: free money creation

The launch of the Palmas focused on instilling trust in the new local currency to establish it as a valued medium of exchange within the neighborhood. Once this trust was established, and people became accustomed to spending Palmas at parity with the national currency at various local businesses, it became feasible to incorporate a percentage of Palmas into each micro-loan offered by Banco Palmas within the community. Since the introduction of the Palmas more than twenty years ago, Banco Palmas has been able to allocate over 20% of each loan in Palmas, based on the spending opportunities available to their customers in the neighborhood. Throughout all these years, they did not rely on donor funding or savings. These Palmas became "circular" or "recycled" local currency, deriving their value from their usability in repaying the debt for which they were initially created. In technical terms, this money creation process is not significantly different from what formal banks do in the financial sector, but it is interest-free and community-owned. Its mission was to foster local economic opportunities within the community without burdening it with interest payments.

Banco Palmas and the movement of Brazilian community banks

Banco Palmas boasted a competent and dedicated team during those years, individuals who were both passionate and capable of advancing the initiative. While STRO focused on software development and innovations, Banco Palmas made remarkable progress and achieved significant outcomes. Their activities attracted numerous researchers, including Eduardo Diniz, a professor at the renowned Fundacao Getulio Vargas. His 2008 research, conducted alongside Martin Jayo and Marlei Pozzebon, demonstrated that at the time, 240 local businesses accepted the Palmas, and 22% of the district's residents experienced increased income directly linked to the Palmas. It is no surprise that other communities began to replicate this model. Banco Palmas sparked a movement, leading to the establishment of community banks throughout Brazil, even in the most challenging favelas. To this day, a portion of the loans is still granted in Palmas, ensuring that the money circulates within the community and is created without the necessity of extracting tribute from the neighborhood for the benefit of an investor or bank.

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Chapter 5

Money and the Organisation of the Economy

Introduction

The showcases of Preston, Wörgl and Fortaleza are central to STRO's Research and Development (R&D) efforts aimed at developing innovations that offer new perspectives for underperforming regions. The following three chapters explain why cities and regions perform below their potential. As indicated in Chapter 1, you might consider skipping these theoretical chapters for now and returning to them only after completing the practical chapters. In that case, please proceed to Chapter 8, which illustrates an example of a holistic, integral development approach.

If you choose to continue, please know that these theoretical chapters do not focus on better-off communities and groups. Instead, the focus is on how money functions, or dysfunctions, for groups and places where insufficient money is circulating within poor economies to facilitate an optimal organization of the local economy. Why does this situation arise?

In Chapter 6, we will discuss the rationales and mechanisms behind the insufficiency of money in underperforming regions. What mechanisms contribute to the scarcity of money in your specific region? Chapter 7 highlights a specific element: Most poor economies suffer from ill-fitting exchange rates. We will explore how this issue is a well-known problem at the national level, referred to as the Dutch disease.

Definition: the local economy

(Community, Neighborhood and Region)

This book is intended for a variety of communities. We will most often refer to the economy or the local economy. However, how do we define "local"? Such geographic or social groups possess distinct characteristics that distinguish them from dominant areas or groups. Members likely identify themselves as part of that specific area or group. The prevailing conditions offer fewer opportunities for their inhabitants. Some decades ago such a community could be recognized by its local newspaper. Those publication depended on common items that interested individuals in the proximity of local companies that finished the paper by their advertisements. A local payment system needs many potential users to enable money circulation. A village with 1000 houses situated 3 kilometers away from a larger city may not meet the criteria, but such villages far from the mainstream economy might qualify. The community's definition could also be based on language or a racial aspect.

We aim to engage the authorities (local, regional, provincial, or national, especially if their economy is on the unfavorable end of the currency zone) in our efforts, and they might even take the lead. Consequently, such an administration must prioritize the interests of the community.

Another criterion is that the targeted community should gain from an increase in the local multiplier, particularly if its GDP is currently underperforming and people and businesses are grappling with the underutilization of capacities. The opportunities for locally produced products and services for local use remain inadequately exploited. For instance, the state of buildings and housing might be subpar.

To sum up, we are addressing numerous potential users of the methodologies outlined in this book. To prevent fixating on a specific level while reading, we will interchange the terms region, community, neighborhood, area, or local area throughout the text.

In summary, the preceding chapters underscore that the underperformance of regions is intertwined with a lack of money to support their local economies. In communities, money serves as a medium of exchange, generates demand from clients for local enterprises, and functions as a tool for the community to invest in a shared future. When money is insufficient for these purposes, a scenario of continual underperformance within the local economy becomes highly likely.

Regions not performing up to their potential often grapple with a circumstance where inadequate money exists to incentivize individuals to specialize and businesses to diversify or invest in production facilities. For instance, consider a small factory that produces aluminum pans, operating four days a week for five hours each day because that's the extent of their sales capacity. Such a company might find innovating challenging as they rely heavily on the local market. Introducing an improved type of pan could result in diminished sales of their existing pans. Such companies must secure clients and cannot expand their workforce, which could enhance local consumption while boosting local production.

With limited local production geared toward local consumption and a restricted number of companies, businesses cannot leverage local production as a foundation for initiating exports. Given the presence of only a few (paying) customers, existing specialists struggle to survive, and the likelihood of new specializations emerging is minimal. This becomes a self-fulfilling cycle: if companies and individuals cannot earn money locally, they

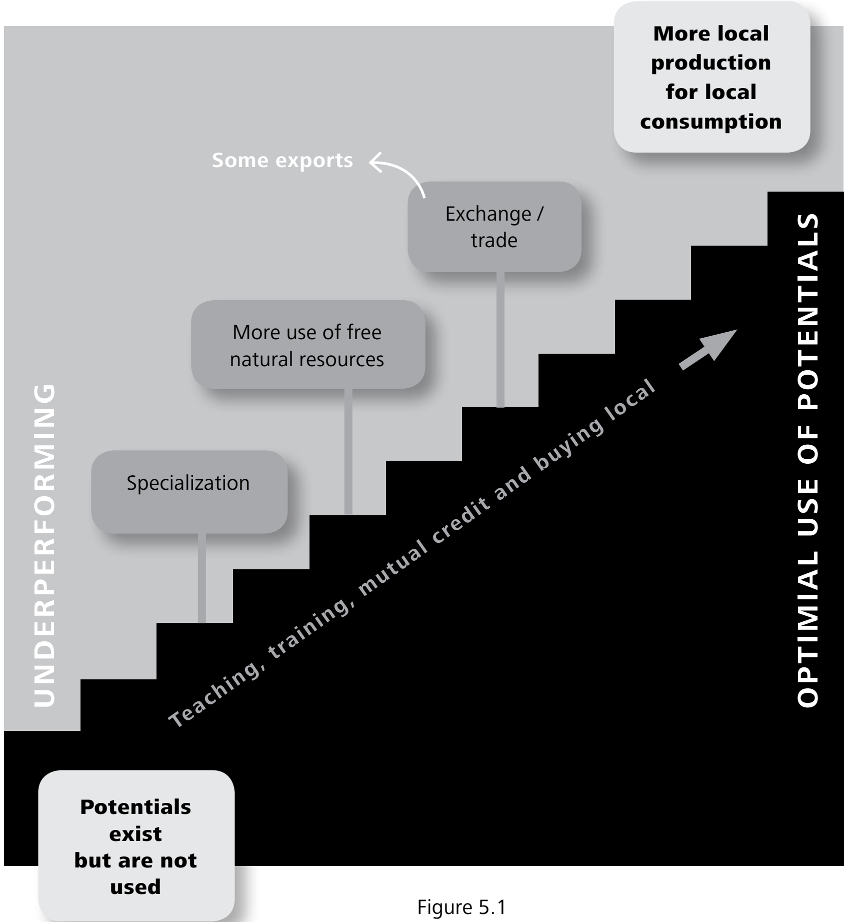

Figure 5.1
Underperformance is characterized by:
- underemployed people;
- underuse of natural resources like mud for bricks, or bamboo and reed for thatching roofs;
- capabilities and know-how are hardly transferred through education and training;
- money is lacking to organize trade and specialization.

cannot spend it. Consequently, there are insufficient customers for retailers and businesses. This leads to stagnation and a narrow window of production, resulting in a limited array of occupations and jobs. Such a situation certainly does not provide the ideal environment for young, emerging companies to explore new niches that would contribute to increased prosperity.

In the present chapter, we outline our perspective on the type of money currently prevailing in society. This form of currency orchestrates the economy as a mere sideshow. It primarily serves as a tool for power concentration and speculation. This leads us to argue that poverty is not an inherent destiny, but rather the outcome of embracing money as a repository of power. Subsequent chapters will reveal the feasibility of alternative forms of money; we can sever the connection between money and power by implementing a fee on money that remains unspent and hoarded. The introduction of a fee on financial transactions would prompt a different pattern of monetary behavior.

The monopoly banks have to create money introduces a competition for scarce money

Many people believe that, by its very nature, the market economy is a battlefield with cutthroat competition. Some accept this belief, considering it necessary for efficiency, while others detest it. It is worth going deeper into this matter to gain a better understanding. Upon closer examination, it becomes clear that competition within the market economy is not solely centered on market share. Instead, it is dominated by the competition to access scarce money. Competition related to markets motivates entrepreneurs to develop niche markets, but the competition arising from the scarcity of money is akin to a battlefield where one company succeeds in acquiring clients' funds while others falter and fail. This battlefield is not confined to corporate entities; it also significantly affects regions and societal groups. In certain areas,

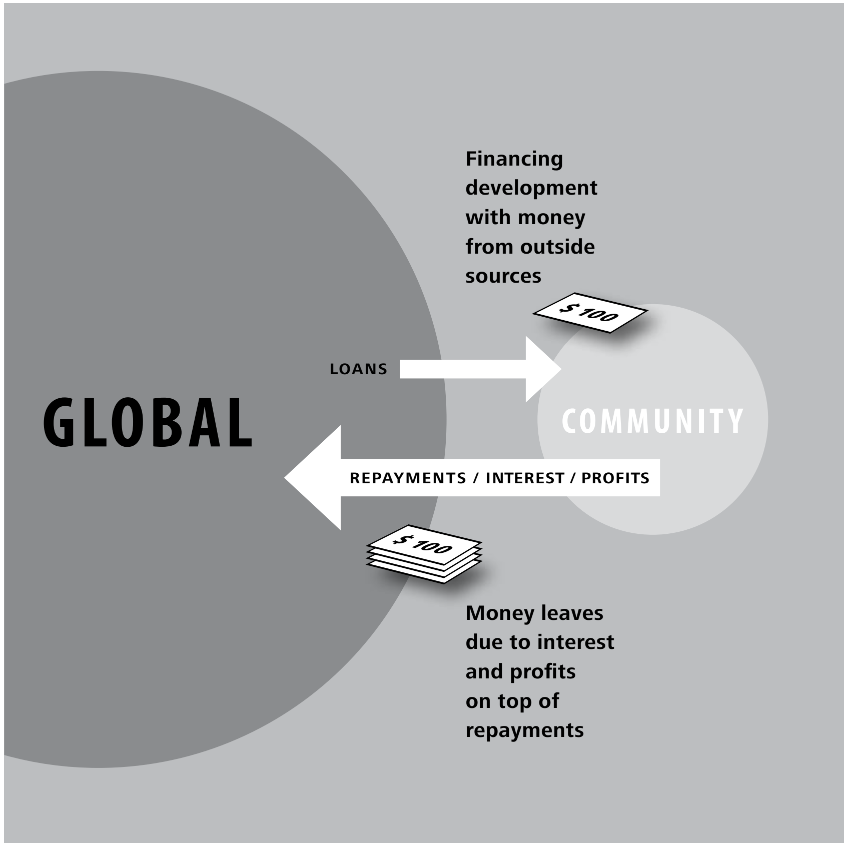

Figure 5.2
A huge invisible flow of interest is formed by the return on the money used as capital in the production process. These investments are mostly higher in the high-end products provided by the global market than the exports by poor economies. Consequently poor economies are stuck with a low rate of investments. Interest-free Social Trade Credits (to be explained in the next book) and mutual credits facilitate trade without extraction.

money is scarce, leading to people suffering from a lack of financial resources. This scenario parallels a game of musical chairs, where winners amass wealth while many others become victims of the insufficient availability of resources (Graeber, 2011).

In today's reality, money is only generated when scarcity reaches a point where interest can be levied to extract profits, favoring the financial sector (which will be further explored in the subsequent chapter). Under these circumstances, the current economy only resolves such scarcity by introducing more money. The interest yields scarcely circulate back as purchasing power within the productive economy; instead, they are swiftly absorbed by speculative activities. With each new credit, this leak exacerbates, endangering the available money for the production-consumption cycle. This risk can be mitigated by introducing even more money. This situation can be likened to taking from one entity to give to another, similar to the saying "robbing Peter to pay Paul". Like compulsive gamblers, we convince ourselves that this cycle can continue indefinitely. However, at a certain point, the rate of money creation slows down compared to the volume of money exiting its role as a medium of exchange, transitioning towards earning through monetary transactions.

As long as the creation of money against interest continues to deplete the available funds for organizing the economy, certain cities, regions, or countries will find themselves at a disadvantage – no wonder we face such intense competition for the limited pool of money resources.

In a next book, we will go deeper on this topic. It will demonstrate that the monopolized creation of money against interest is a deliberate choice and can be approached differently. However, this paradigm is not easily questioned, as the interests of the powerful and wealthy influence perceptions. Many individuals struggle to recognize the issues associated with the concentration of monetary power (Aglietta & Orléan, 1998; Dodd, 2014). The existing nature of money is not inherently *the* nature of money.

Chapter 3 explained how the introduction of stamp obligations for vouchers in Wörgl altered the nature and behavior of that form of money. The voucher-based currency was unsuitable for storing wealth or transferring power. This situation eliminated room for speculation. Moreover, the currency will circulate rapidly if retaining money incurs substantial costs. There will be no need to entice those with resources to lend money with an interest premium. They

We once encountered a microcredit institution that firmly believed they were supporting their local business community. However, their focus was on repayments and not on prolonged circulation of the money within the community, To elucidate why we considered the impact on local considered the impact on local circulation to be as crucial as repayment, we centered our attention on a particular case. This case involved extending credit to a baker to aid in the modernization of their bakery and the reduction of production costs. Initially, this seemed favorable, until we broadened our focus to include the rest of the community. This broader view revealed that the credit also led to the financial downfall of two other bakers. As a result, two families faced unemployment, and their contributions to maintaining the safety of the neighborhood ceased. What's more, due to interest payments and a shift towards imported products resulting from the increased wealth of the successful baker, there was a reduction in the circulation of money within the community. It's conceivable that the community would have benefited more if the microcredit institution had invested in diversification, supporting one baker to skip baking bread, increasing the market for the other two, and investing in that baker to become a bakery specialized as a pastry shop. The increased specialization and trade options in the local economy would affect the overall wealth of the community.

Figure 5.3
As it becomes evident in rich countries during a global depression, companies need enough demand to flourish. Poor communities face in many ways a permanent depression and businesses get too few clients. The flourishing wealthy economies compete the few surviving local producers out of market, leaving local entrepreneurs little room to start or maintain their business.

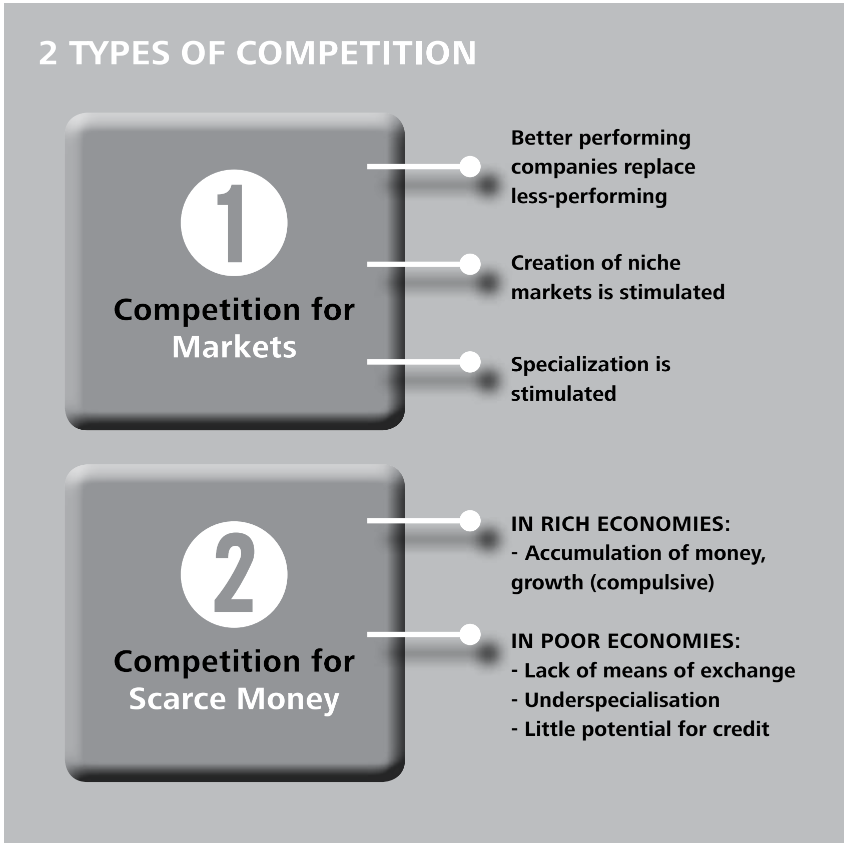

Figure 5.4
We think of competition as one concept. **In reality at least two very different fields of competition can be defined and the type of competition matters.** The term market economy suggests these economies are about competition for markets, while in reality the competition is mainly for scarce money.

would be content to shed the responsibility of paying the stamp fee when lending, passing the stamp costs to the borrowing party in the market. Imposing a charge for not utilizing money establishes a market condition that renders demanding interest unfeasible. Under such circumstances, banks – or potentially the government – can consistently maintain the money supply at a level where competition would no longer center around scarce money.

When a loan's repayment does not exceed the amount injected into circulation by the credit, the role of money transitions from an end to a means. The money supply could then ebb and flow with production and trade levels. More importantly, such interest-free money would enhance opportunities for companies that pioneer new market niches. This, in turn, would provide regions with additional prospects for wealth creation.

Conflicting functions of money leading to underperformance

Economic textbooks continue to cite three functions of money:

1) **A means to quantify value**
2) **A means to facilitate exchange**
3) **A means to store value**

Taking into account the real-world dynamics beyond theory, we will elaborate in the following sections on how the function of storing value serves as the foundation for power accumulation and how economic reality has evolved beyond these three functions.

1

A Means to Quantify Value

Any item can be used for quantifying value, provided there is a consensus on its value. It could be chickens, liters of milk, or grams of gold. If we know the cost of a shovel, expressed in chickens, and the value of a chicken in liters of milk, we can use a milk transfer as a

IMPACT OF MICRO CREDIT

Traditional

A MFI is successful if they make a profit

Based on
+ Volume of credit
+ Repayment rate
+ Level of costs clients need to pay (interest)

Regional

A MFI is successful If more money circulates locally

Does it
+ increase the export income of clients and is that income spent locally ?
+ reinforce social cohesion (social capital) ?
+ introduce additional use of local resources for local consumption ?
+ stimulate specialisation and facilitate exchange ?
+ help to realize clusters of SME's ?

Figure 5.5
Objectives and evaluation of Micro Finance Institutions (MFI) should focus on ***the impact of the loans on the local economy*** within the condition that such a program can ***recycle*** loans.

means of payment for the shovel. The example of shell money in Polynesia demonstrates that the unit used to quantify value need not possess intrinsic value. In the digital era, we have grown accustomed to using fiat money. This currency lacks intrinsic value but represents a claim on a bank's balance sheet (partially backed by a central bank) and is universally accepted as a means to settle tax obligations. It holds legal tender status, and since the public is mandated to pay taxes specifically in that currency, it establishes a baseline for its value.

2

A Means to Facilitate Exchange

Serving as a means of exchange makes money the primary organizer of transactions between producers and consumers during purchases and between producers and their employees when salaries are disbursed. Money influences the prioritization of purchases, consequently affecting investment decisions. We will not delve into this topic further in this paragraph, as a significant portion of this book already addresses money's organizational role at the local economic level.

3

The Store of Value: A Tool for Concentrating Power

Money also serves as a tool for storing value, and this function predominates over all other monetary functions. It frequently conflicts with the exchange necessary to organize production and consumption. Let us examine this more closely, beginning by assessing the accuracy of the term "store of value".

Simply put, the store of value pertains to the consolidation of power. It revolves around the ability to transfer power across time and space. While this may seem neutral when considering saving for old age, it is far from neutral. For instance, the concept of a pension aims to purchase care in old age. However, this care is not a benevolent gift but relies on the power of money to compel someone to provide this service. Storing value is intricately tied to further power concentration. Referring to this function as a “store of value” is misleading. It conjures images of banknotes under a mattress or digital money in a savings account. In reality, money itself cannot store wealth. It can only store power when it is scarce and remains scarce, enabling the wealthiest to use it to accumulate more wealth and, consequently, more power. A more accurate description of this function would be the “concentrator of power”.

Money is an efficient tool for wielding power as long as it remains scarce and highly sought after. Scarcity imparts value to money, reflected in the interest rates that those with excess funds can demand from companies required to finance production.

The combination of the power function and the function of facilitating exchange within the current monetary system has several negative consequences. It occasionally leads to global economic depressions and introduces a hidden form of inefficiency when the power function denies communities access to this tool for organizing local capacities. Furthermore, the relentless concentration of wealth has become a threat to life on Earth.[1]

The concentration of wealth has also empowered a select few to invest in expanding production, research, and more. This substantial growth in production created numerous opportunities, justifying, for a time, the inherent negative aspects. These investments propelled economic growth, significantly elevating

1 This notion aligns with debt-based money creation (Graeber, 2011; Van Egmond & de Vries, 2020). This concept posits that our current monetary system leads to substantial private and government debt. However, as long as the economy expands faster than the accumulation of debt, this outstanding debt diminishes concerning GDP. Consequently, governments are motivated to pursue GDP growth to make high public and private debt more manageable. Advocates of more radical transformations in the monetary system contend that this binds us to an unending cycle of perpetual economic growth and ecological degradation. Altering this trajectory becomes exceedingly challenging due to the mounting burden of public and private debt.

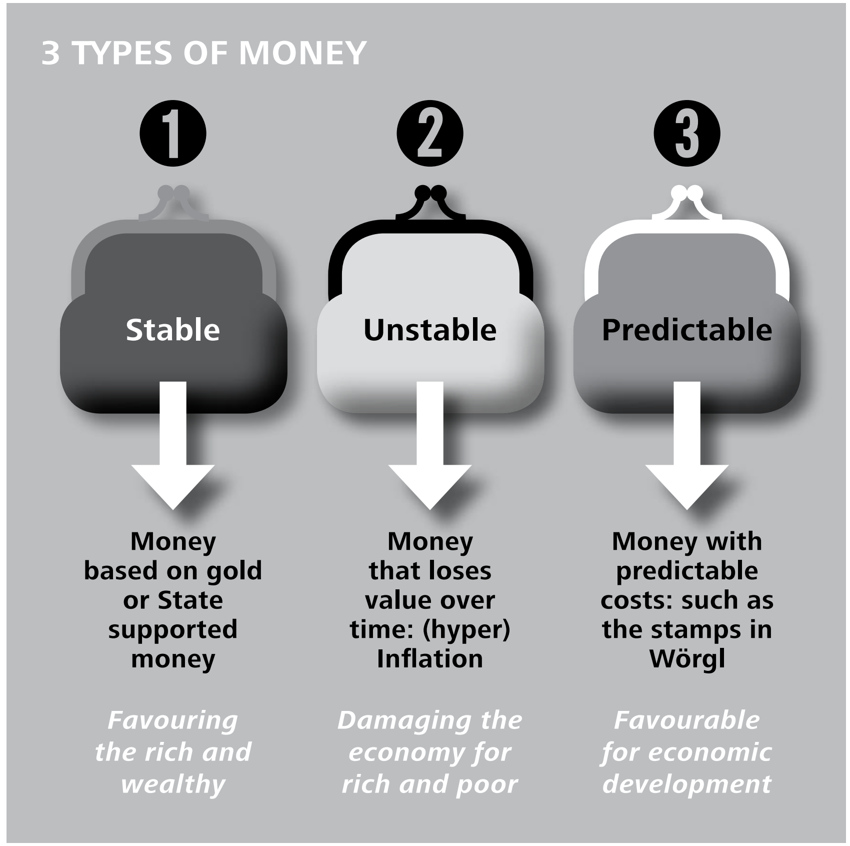

Figure 5.6
The type of money matters. We have a choice, especially now that digital payment technology can introduce the kind of money like what was used in Wörgl easily. When money is digitalized Central Banks no longer have to use Quantative Easing to fight depression, but can also introduce negative interest rates on current accounts to make money move faster.

the Human Development Index in affluent countries until the 1970's. Regrettably, the most lucrative investments were those that intensified the extraction of energy and natural resources for consumables, depleting nature in the process. On the balance sheet, you acquire consumables while depleting capital. Investments that reduced the use of natural resources and expanded options for future generations have been, and continue to be, relatively rare compared to the depletion of scarce resources.

4 & 5

Money as a tool for speculation and to prevent speculation

The perspective of only three functions fails to acknowledge that money's role as a speculative tool constitutes at least a fourth function in the modern context. Nowadays, money is utilized more as a speculative instrument than merely a medium of exchange. The societal impact of this function warrants a severe speculation consideration as an additional function of money. Hedge funds and derivatives command a significant portion of the economy. While this is closely tied to money's function as a tool of power, it is also intricately linked to algorithms that direct money to optimize profits.

Regarding its consequential effects, the power is no longer centered on individuals. However, it has been transferred to an anonymous mechanism derived from algorithms designed to generate greater monetary value. This technological decision, made without regard for its impact on humanity, underscores this shift.

Adding speculation as a recognized function of money introduces a fifth function. This fifth function of money is the ability to serve as a tool for safeguarding against speculation. Indeed, speculation and its ramifications are not novel concepts; they notably surged until the late 1920's, culminating in the Great Depression and the Second World War. After that war, speculation grew again, escalating even further after the economic deregulations of the 1980's, after the 1970's oil crisis. It gained momentum with the advent of computers, enabling money to transition between opportunities at minimal costs fluidly. Even amid crises such as the Enron scandal and the 2008 financial crisis that demonstrated the potential damages of speculation, speculation remains dominant in international financial markets. The fervor of individuals participating in the financial market gambling mirrors the dot-com boom of the late 1990's. Cryptocurrencies have now emerged as a significant new venue for such speculation, benefiting some while exacting losses from small traders. A moral restraint has waned, with little consideration given to who bears the losses as long as some achieve substantial gains. Thus, the continued relevance of recognizing this fifth function is evident. Short-sellers' menace compels businesses to safeguard their access to raw materials, while nations are compelled to shield their currencies. In many instances, the resources expended to defend against speculation exceed those utilized for speculation and market manipulation.

The following paragraphs will go deeper into the adverse consequences stemming from the evolution of a form of money where the role of storing value predominates.

The scarcity needed to store power obstructs development

To make money a tool of power money needs to be scarce. Such scarcity is not evenly distributed and blocks many regions to develop to their full potential and unique qualities. This musical chairs game results in an uneven distribution of abundance and scarcity. The lack of money limits potential exchanges between local producers and clients in many communities. Within impoverished regions, the uneven distribution leads to wealthy individuals adopting a lifestyle incongruent with the poverty in the area.

A substantial amount of money leaks away from the community to finance the imported luxuries of these fortunate few. This money is lost for organizing local production for local consumption, hindering a positive developmental spiral.

Consequently, local economic actors cannot unlock their potential for local production. This scarcity is often viewed as a consequence of poverty rather than a cause. The scarcity of money in poor regions is rarely associated with the type of currency in circulation. It is time to reconsider this relationship.

Considering what happens when money becomes scarce in affluent areas may help us understand the daily struggles in poor regions. In wealthy regions, money becomes scarce during a global economic downturn when people and businesses reduce spending and hoard their money. This leads to reduced availability of money, causing producers to hesitate in production. Consequently, even existing production and investing in consumption shrinked, and people became poorer. This contraction is usually a temporary setback for the wealthy, but in many underperforming communities people become poorer, and the lack of money is a permanent obstacle to development. The absence of money for economic organizations keeps their potential untapped. As demonstrated in the three previous cases discussed in earlier chapters, injecting more money into the local market generates additional income and jobs.

How intelligent is the dominant form of currency in organizing the economy if it prevents the majority of humanity from reaching its full potential? Is this type of currency truly efficient? Furthermore, we may question the wisdom of a currency system that forces affluent nations to choose between perpetual (and unsustainable) economic growth and crisis, posing a threat to all life on the planet. This currency does not benefit humanity on either end of the spectrum.

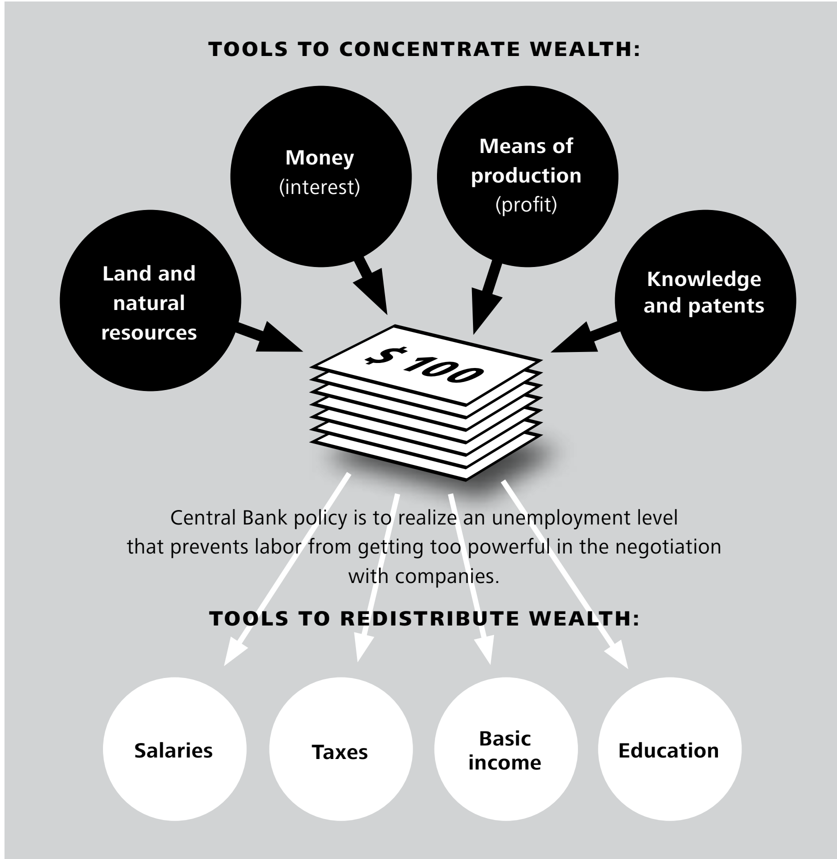

Figure 5.7
Various mechanisms concentrate wealth and all these result in less money to organize poor economies. Inside one country this process can be countered by policies that stimuolate the redistribution of wealth.

One significant difference exists between underperforming and wealthy regions that are facing a global depression. When affluent regions experience a worldwide economic downturn, it is widely recognized that the depression results from a dysfunctional monetary system. Efforts are made to rectify the issue from that perspective. In contrast, in regions that consistently underperform economically, people are not actively seeking a different type of currency to improve their circumstances. They may not even perceive the situation as a persistent local economic depression. Instead, inhabitants of impoverished regions often face blame for their poverty, and at times, they even internalize this perception, seeing themselves as the cause of their misery.

Regrettably, this leads to a situation where no one actively seeks solutions to combat the lack of economic activity resulting from a perpetual regional depression. While metropolitan areas may allocate some funds to support poorer neighborhoods and regions where they conduct business, there needs to be more research and development dedicated to addressing the monetary mechanisms associated with poverty. Even more concerning is that many scientists believe that a solution does not, or cannot, exist.

When we zoom out to consider what would be most beneficial for all, it becomes incomprehensible why the fortunate few persist in acting against the long-term interests of everyone, including themselves. They fail to leverage their power to transition to a different form of currency that does not perform so poorly and does not jeopardize life on Earth.

Future-proof, inclusive prosperity must break the vicious cycle of local currency shortages and increase opportunities for small businesses in many places. Additionally, providing access to

credit for working capital and, preferably, investments to mobilize their potential is crucial. To achieve this, it is fundamental to understand that poverty is not an inherent destiny.

Some decision-makers may be tempted into inaction and begin to view poverty as an inevitable outcome. Others may feel like victims of political opponents. However, the inefficient nature of the current monetary system, which organizes markets, often goes unchallenged. Under this existing monetary system, markets frequently function sub-optimally or even inefficiently. Consequently, many talented individuals are denied the opportunity to develop their potential.

On a gut level, people will focus on the wealthy "robbing" the poor of money as wealth. This polarization, however, does not contribute to the understanding needed to bring about change. More effect can be gained by focusing on the structures that deprive poor communities of the means of exchange to organize and develop their talents.

This book will persuade you that the way money organizes society and influences market behavior is not set in stone, and alternatives are indeed possible.

When money is scarce there are few investments and much un(der)employment

The scarcity of money has direct consequences for many regions. It begins with a lack of opportunities for small businesses to sell their products or services in their immediate environment. To compound this issue, credit is scarcely available and often comes with exorbitant interest rates. Such elevated interest rates deter most of the productive potential from being activated. As a result, potential job opportunities remain untapped. The consequence is evident in the form of limited job opportunities, meager income generation, and consequently, businesses struggling to find cli-

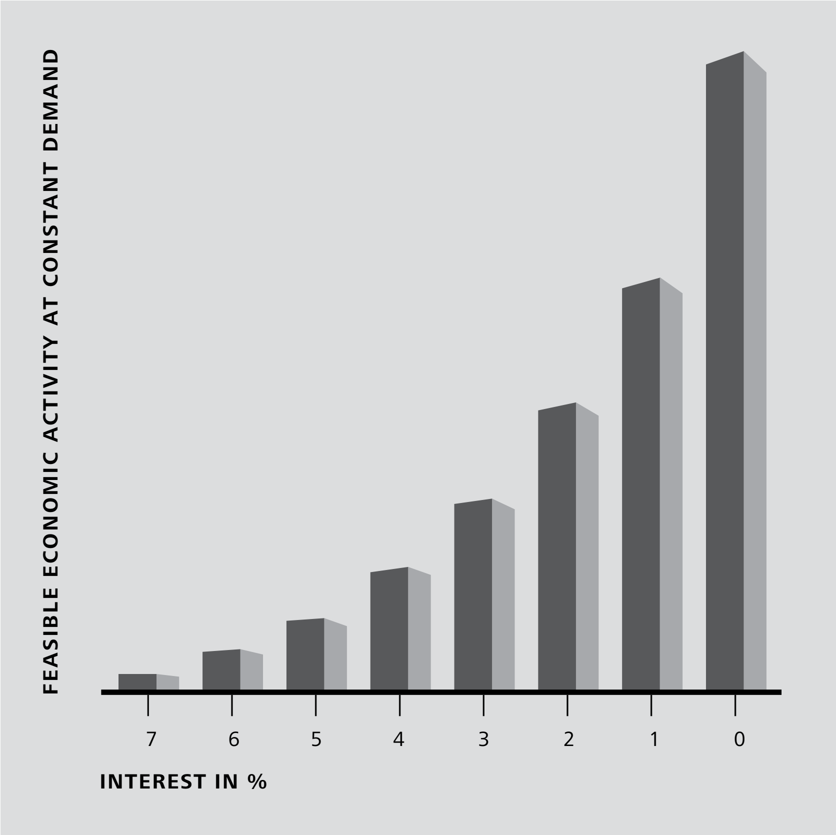

Figure 5.8
The level of interest on the horizontal is zero on the far right. In regions where the interest rate is close to zero percent, not because of a recession but because the inflow of money surpasses the outflow, investments only need to recoup the borrowed amount.

On the left axe one can see the impact on the availability of jobs. Many investments get feasible, especially long-term investments such as in infrastructure, high quality construction, sustainable energy, etc. This delivers employment opportunities as well a more sustainable economy.
Such a low interest rate combined with a high conjuncture (instead of depression) can be created by a demurrage fee on money that is not being spend.

ents.[2] Hopefully, many people will realize that accumulating material goods does not make us happier. Does economic growth in wealthy countries make us more satisfied with our lives? More and more economists are writing about this, considering that the focus of our economies should be well-being under environmental constraints and the importance of vibrant local economies to support this change (Hickel, 2021; Jackson, 2021; Raworth, 2018).

If money offered to invest gets cheaper while all other aspects stay the same, the volume of investments will grow up till a level that self-sustaining but not profit-yielding investments can find money, clearly with huge concequences for the volume of employment opportunities.

On the left side of the horizontal axis in figure 5.8, interest rates are high. Economic activities in this realm are scarce because they must generate sufficient returns to cover that interest level. Most investments cannot attain such returns and may not materialize. Being profitable alone is insufficient; economic activities are evaluated based on their ability to service the interest. Many activities can never generate such high returns, and consequently, numerous capacities and job opportunities remain untapped. Unsurprisingly, areas in this predicament remain impoverished and grapple with high unemployment rates. Consequently, the residents of these areas have limited opportunities to develop their entrepreneurship skills.

When examining the continuum above, it becomes evident that in underperforming economies, the potential of economic activities is significantly contingent upon the level of interest. During our work in the Global South we seldom met loan programs

2 Please be aware that we focus here on the aspect of interest related to the creation of money, NOT on the part related to the insurance of the credit risk, and NOT on that to pay for the cost to facilitate the organisation of credit. These costs come on top of the interest based on the scarcity of money. Recall the classical functions discussed earlier: a means of exchange, a unit of account, and a means of hoarding.

for SMEs demanded less than 10% interest, and often 25% was demanded. Considering these conditions, it is not surprising that underemployment is common.

Regional shortage of money in a global economy that seems to function fine

The situation in underperforming economies can be summarized as follows: there is a dearth of incoming funds. Export income often relies on raw materials owned by a few affluent regional individuals who possess the economic influence to attract money. Conditional Cash Transfers contribute somewhat to local circulation. However, due to the scarcity of credit approvals, supply chains cannot expand, and new offerings fail to materialize. Ironically, the regions with the greatest need for additional funds are the ones with little creation of money, or none at all.

It is often arbitrary to assert that there needs to be more money. Alongside the quantity, the circulation speed plays a pivotal role in determining the extent of economic activities that can be orchestrated. Primarily during a global economic depression, the connection between a deteriorating economy and a shortage of circulating money becomes readily apparent. This occurs when a significant portion of available money suddenly ceases to circulate and is instead hoarded because people lose confidence in the economic future. Subsequently, a self-fulfilling prophecy ensues shortly after individuals and companies become apprehensive about spending. This situation can quickly lead to a decline in business sales. In economies that have long grappled with challenges, a dearth of money is far less conspicuous, especially in cases where the economy remains trapped in a permanent state of depression. The absence of jobs, income, and customers has gradually manifested and is consequently perceived as the “norm.” Over time, numerous businesses have ceased operations, and an unknown number have never even commenced. The neighbor-

Figure 5.9
The tragic cycle of underperformance in economies with too limited availability of money.

hood, city, or even larger community progressively lags behind more prosperous economies, prompting disadvantaged individuals to seek refuge elsewhere.

To exacerbate matters, the limited available funds quickly exit the community without restrictions on this outflow. Consequently, local producers have limited earning potential, and in such circumstances, prospects for initiating new local businesses are nearly nonexistent. This, in turn, affects the income consumers receive through wages. Scant income further diminishes the potential customer base for local businesses. Local production for local consumption needs to be more utilized. The few surviving companies offer a weak foundation for export development, leaving little room for innovative startups. Consequently, the region experiences stagnation, with young individuals emigrating, exacerbating the situation.

Upon recognizing this, we are continually dismayed by the wasteful squandering of potential. People are either unemployed or work inefficiently, and they will only cultivate labor skills and work ethics if they compete in (inter)national markets. These individuals could lead prosperous lives by producing goods that benefit their community if only money could facilitate continuous connections between local producers and consumers. For example, people could reside in homes constructed with local materials. Construction often provides the impetus for generating additional purchasing power, which, in turn, motivates entrepreneurial individuals to become local suppliers. As will be discussed in chapter 8, newly constructed homes incorporate a natural water filtration system. However, this additional local circulation is hindered because the tool required to organize it, money, vanishes before it can be employed for facilitating such reciprocal exchanges. The continuous outflow of money sets the stage for a downward spiral of misery. There is no money due to a lack of local production, resulting in meager wage payments and perpetuating the cycle.

Conclusion

While reading this chapter, we hope you have concluded that money is more than a neutral token for organizing the economy. While various forms of money exist with different ways of structuring economies, the dominant global currency primarily aims to consolidate power. Speculation drains away this currency and compels legitimate businesses to counteract such speculation. It is imperative to reconsider the prevailing form of currency because it orchestrates the global economy around a shortage of money in many impoverished neighborhoods, cities, provinces, and even countries. This ingrained scarcity of money within the dominant currency stifles development in numerous impoverished regions, keeping them ensnared in perpetual economic depression. This situation results in:

- **Wasting human life, talent, and potential, with individuals underestimating their capabilities.**
- **The forced migration of enterprising individuals is a heavy blow to local productivity.**
- **The focus on exortation of raw materials and agricultural products results in unsustainable growth and the degradation of local environments.**
- **Lack of a critical assessment whether the income earned with the exports contributes to the local money circulation.**

While not discussed in detail here, other significant issues include inequality, corruption, and crime, often associated with the narcotics trade.

Numerous other factors contribute to challenges in specific areas, and the scarcity and outflow of money are not the sole causes. Nevertheless, when money disappears too rapidly and local businesses struggle to make sufficient local sales, it adversely affects everyone involved: local entrepreneurs, the employees of local businesses, and the local government. Even potential foreign suppliers may suffer negative consequences. Yes, even them. At first glance, it may not be obvious, but other cities and regions suffer when neighboring areas become impoverished or remain in poverty. These regions may experience reduced income and fewer spending opportunities. Additionally, impoverished regions may no longer contribute to government financing and perpetually rely on government funding without significant improvement. Therefore, it is essential to recognize that the most prosperity is achieved when individuals everywhere have the opportunity to develop their capabilities thoroughly.

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"The book explores the pivotal role of money in local economic development. The authors skillfully blend theoretical insights with practical examples, emphasizing the untapped potential of this medium of exchange. A thought-provoking read, it is essential for those interested in economic development strategies."

Bart Minten (Myanmar)

Senior Research Fellow in the Development Strategies and Governance Unit of World Food Program

"STRO makes visible that there are other conceivable and feasible paths to a dignified existence. The resulting innovation can take us several steps further. STRO is thus building a local alternative to the increasingly dominant financial markets, with an emphasis on circular economy with plenty of room for strong development of local small businesses."

Prof. Dr. Herman Wijffels

Former director of the World Bank

"It seems to me that giving left-behind communities a perspective of greater independence from the financial markets is of utmost importance for their future economic development."

Wolfgang Streeck

German economic sociolігist and writer, Director emeritus of the Max Planck Institute

"Local money systems can play an important role in supporting local communities. The authors show how such systems, if professionally designed, can also strengthen the local economy. This book describes how old good ideas can be strengthened with new technology. It is required reading for anyone who cares about the local community."

Wim Boonstra

Chairman of the Monetary Committee of the European League for Economic Cooperation (ELEC)

Chapter 6

Reasons Why Money is Scarce in Many Economies

Introduction

In the previous chapter, we concluded that the underperformance of economies is inevitable if there is too little money to properly organize the production and consumption cycle and invest in productive chains. We made the point that the type of money introduced as bank credit is systematically scarce. Thriving economies are not bothered by this scarcity, but weaker economies are. In these communities, the lack of money creates a situation of permanent underperformance of the local economy, a quasi-permanent depression. This chapter will look at the various dynamics that force scarcity of money on the performance of the economy.

The apparent result of the scarcity is that there is little money provoking local suppliers and proto-entrepreneurs to produce something. With little local production and trade, the overall wage income is meager, and the income from the tax office is less than what is needed to finance the community services required to prosper the economy. Fewer and fewer producers survive, resulting in even more available purchasing power disappearing rapidly from the local economy. How many times the money that enters circulation is used is highly affected by this drain. The impact on the local business community is so immense that local actors, who consciously try to buy more locally, will often even

not find a local supplier. Still, spending more of the money available within the community is possible and a step needed, even if it would mean that the anchors would start in-house production.

Money is absorbed by the financial sector

Worldwide there is no scarcity of money in absolute terms. Still, in many places, there is such a scarcity that people have to go to the bank to get money, and the market can demand interest.

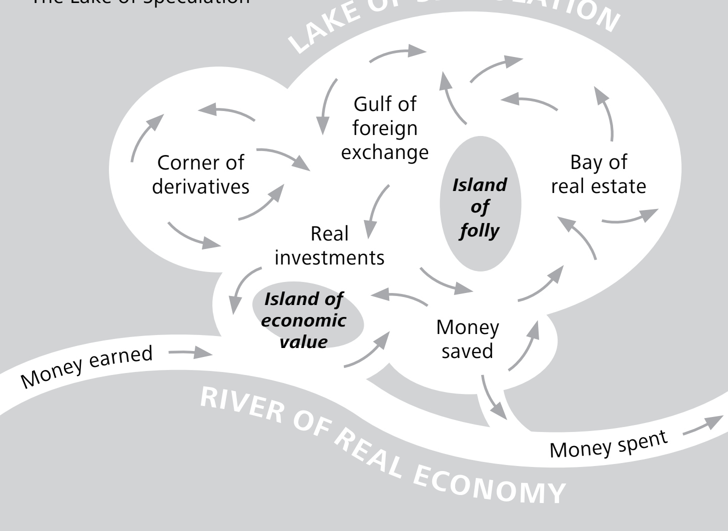
The first reason for the lack of money in many places has little to do with the volume of money but with what money is used for. Over time, more money has been created than the growth of the economies would make necessary. That should result in an abundance of money and not in too little money to organize the economies. However the additional money did not solve the scarcity that exists in many economies. This is related to the yields on investments in speculation that have increased since the 1980’s. These yields exceed the gains in production. Very high returns can be achieved through risky, relatively short-term investment strategies that attempt to “buy low and sell high” or earn by manipulating the market. Money occupied with that type of use is not interested in being invested productively and not at all to organize the economies of poor communities. The speculative use of money provides yields better than the productive use.

Examples of things bought and sold in the speculative bubble are currencies (ForEx), put and call options, real estate, a wide range of increasingly complex derivatives, and even things unrelated to the real economy, like cryptocurrencies and NFTs. While studying the US, Minicozzi, McCarty and Marohn found a mismatch between short-term investment strategies and long-term public needs to maintain infrastructures. Investment funds were interested in making cities grow rapidly. However, once these investors cashed in their profits, they left the community. The cost of sustaining the investments by maintaining the infrastructure was shuffled off to inhabitants who could not afford it. This was demonstrated by the researchers in the case of Lafayette, Louisiana (Marohn, 2017).

Relative to the inflow, only small amounts of money leave the speculative sector to be used for real investments or spent on products or services. This is because the very rich do not need most of the money they earn to pay for their consumption. This makes sense since the people who own the money invested in speculation are so wealthy that they reach optimal consumption. Their technicians reinvest most of their profits to expand their fortunes further.

The "lake of speculation" (figure 6.1) thus keeps on growing, crippling monetary policy and exacerbating wealth – and consequently income – inequality.[1]

Figure 6.1
The Lake of Speculation



1 Also interesting to study the work of Nate Hagens.

Even while there is far more money around than necessary to connect businesses and their customers and deal with standard investments, most of the money, is not available for that part of the economy because it is engaged in the financial world, where it expects to find better yields. On top of that, the money active in organizing economies is not evenly distributed. Some economies export more than they import or have many opportunities to introduce new money. These do not suffer under-organization but increase the problems for others.

Rich economies can create additional money

For this book, the important thing is that in the real economy, this flow of money toward the speculative sector creates a steadily growing shortage of money. Moreover, scarcity means that, apart from competition by companies and economies focused on markets, severe competition focussed on scarce money occurs leaving many communities without the money to organize the economic relations properly. The poorer economies lose that competition and consequently do not have enough money to organize their economies. They enter a vicious circle because, for them, it is impossible to compensate for the leak by creating additional money.

On the contrary, affluent communities that face a money shortage can introduce new, extra money by stimulating credit. Companies and private people in these countries have enough ownership titles to serve as collateral for new loans. This influx of additional money usually compensates for the money lost to the financial markets. But not always. Sometimes, existing ownership titles are overburdened and do not allow new credit, and even questions are rising about whether repayment of existing credits is secure enough. The 2008 credit crunch is an interesting example showing that credit cannot endlessly be provided.

During the 2008 financial crisis, the credit and the creation of additional money in more affluent countries collapsed. The leak towards the financial balloon was no longer replenished by fresh money. The economy only recovered from the crisis because the FED and ECB took over the "job" performed by credit and pumped lots of additional money into the economy. This is called Quantitative Easing (QE). Even while that QE only for a tiny part ended up as expenditures by people and companies on buying products, capital goods, or services, the extra money still worked to avoid a complete crisis. At the same time, part of that money ended up in speculation, resulting in new bubbles delivering a setback. For example, where the prices of houses were pushed higher, the transfer of money from households toward the financial centers augmented, reinforcing the leak. This might make the approach counterproductive over time.

Central Banks of poor countries do not have the option to introduce additional money through QE at all. That would immediately be reflected in inflation. Local companies have too few options to earn additional income because potential clients only have little money to spend. The level of economic activities cannot deliver additional money flow.[2]

2 This problem is reflected in Fisher's equation of exchange, governing our current macroeconomic systems. The equation is as follows:

M x V = P x T

- **M** is the amount of money in circulation
- **V** is the velocity of money (in how much time the money circulates in the economic system)
- **P** is the price level of goods (reflecting inflation)
- **T** is the real value of aggregate transactions (reflecting the level of economic activities).

Thus, if a country or a region adds money, if this money is not circulating more (V) or the level of economic activity is not increasing (T), it will result in inflation (P). However, as with every economics model, the reality is more complex, and inflation is not always only a mathematical phenomenon and is connected to many other factors, as we can see from the book (distribution, the structure of the economic system, power, scarcity, etc.).

Why is money scarce in underperforming economies?

In our economic system, the central function of creating money is not happening in an open market. It is monopolized by commercial banks, and this has quite some impact: banks that are entitled to that monopoly will only create money if they can earn on that activity. Moreover, that is only possible if money is scarce (Aglietta & Orléan, 1998). It is scarce enough to have a price that allows the banks to profit and not only pay for the organizational costs and the cost to insure the credit risk. That level of interest, that price of money, is only positive under conditions that money is scarce. As a result, in societies where the right to create money is attributed as a monopoly to private, profit-seeking bank businesses, *the scarcity of money is an essential part of the design*.

As noticed, this scarcity is not distributed fairly or smartly. The distribution expresses the power of economies. Consequently, many local economies do not have enough money to organize their economy properly. Without a change in the trade balance with other communities or the option to introduce, create, additional money or affect the intensity of the use of the money available, producers in those economies cannot find enough clients locally. A continuous monetary undersupply prevents them from optimizing the organization of the economic processes.

Local politicians seldom look for monetary innovations to deal with that problem. They believe they already know what to do: stimulate exports. That means that they hope to become cheaper than others and rake in money that, up till then, went to other communities to which they try to pass off the problem of scarcity. Effectively, the competition to conquer export markets introduces a race to the bottom, reducing salaries and care for natural resources. While these salaries are needed to create the demand to provoke local businesses to organize production and trade.

The focus on export is based on the belief that the region or country can become a winner in the global competition, whatever the kind of export and the costs in terms of a loss of resources. It looks away from examples where a healthy local economic ecosystem with diverse small and medium-sized businesses provides the base for export and a feeling of well-being.

The reality of this race to the bottom is that most economies fail to succeed in outsmarting competitors by stimulating exports or only at costs that are too high. Such results should lead to finding ways to depend less on competition in export markets and find an alternative to the money that dominates the world. This discussion, however, does not take place at scale. Primarily because those people in power to implement changes or start the debate have come to believe in TINA *(There Is No Alternative).* Indeed, there is no alternative, but only as long as we accept the type of money that dominates the financial markets as the only money possible.

How long will it be accepted that money should be scarce to make money creation profitable? How long will the main purpose of monetary policy be to facilitate the kind of money primarily focused on transferring power? [3]

Interest sucks money from underperforming economies

Poor economies are net interest payers. These transfers suck the money away that they need for their development. Many economists defend interest based on the idea that it is the instrument that realizes an efficient distribution of money. Investments would go to the most profitable projects. Most profitable in yield, however, is not the same as delivering the best contribution to development and well-being. Underperforming economies need local producers or consumers to afford domestic-produced goods and services. So even if the argument would be valid that interest prioritizes *investments* efficiently, it sure does not help to make *the distribution of purchasing power* efficient. When an economy lacks the money in the form of demand needed to buy from local producers, underperformance can be expected. Interest is counterproductive from the point of view of the efficient distribution of money to organize these economies. The interest payments are a tribute that people with too little money are forced to pay to those with more money than they can use. That has little to do with the efficiency of the investment but a lot with the (in)efficiency of the distribution of money and its absence in the organization of the local economy.

3 Small local companies face not only difficulties in getting affordable credit, but also in getting clients while they cannot offer long warranty periods and a fluid supply of spare parts, the way big conglomerates can. These small companies also lack market power and money to influence politicians, making life harder for them.

Alternatives to prevent hoarding are available

Interest is often argued to be necessary to discourage hoarding. The concept revolves around the notion that individuals with savings require the incentive of profit not to spend that money themselves on consumption, but to make their funds available for lending. We doubt this and believe that the wealthiest people even do not have the capacity to use their money for consumption.

Regrettably, many economists do not explore alternative means to discourage hoarding; instead, they accept this situation as a form of societal coercion. Some even attempt to rationalize it by suggesting that the wealthy would be inclined to offer their resources if it allowed others to make use of their money. While this may hold true for the affluent, it’s challenging to envision a billionaire making such an offer to people that are blocked to actively deploying their wealth.

Before assuming the role of mayor in Wörgl, Unterguggenberger was employed by a railroad company. Legend has it that he stumbled in the train upon a pamphlet on how to prevent money from being hoarded by imposing negative interest charges on those who hold onto their money without spending it. Unterguggenberger translated this innovative concept into the introduction of currency stamps. In today's digital payment landscapes, implementing negative interest charges is relatively straightforward, achieving the same effect in discouraging money hoarding within savings accounts.

From the price of each product, 10-50% is used to pay interest and profit

The level of interest reflects the risk that the loan will not be repaid, plus the organizational cost of the bank and, on top of that, either the reward to people who delivered the money or the reward for the shareholders of the bank originating from the creation of money out of thin air. It is the price to prevent owners from hoarding their money and making such money available to grease the economy and enable investments.

Interest payments increase the costs of production. They get incorporated into the price of every product and add up in supply chains. Everyone, rich or poor, who buys a product pays that interest without knowing it. This is between 20% and 30% of the price one must pay and often a lot higher (Creutz, 2004). We do not notice this: the price we pay feels like a natural thing, and the fact that part of it is transferred to the rich does not show but has a lot of impact. The purchasing power at the bottom of the pyramid diminishes, while money concentrates at the top. Poor people have no option but to pay this tribute, just like everybody else. But they do not have an income from interest. This makes interest inefficient in terms of economic development and undoubtedly unfair.

The impact of interest on investments and jobs

What happens in an underperforming economy where (proto) entrepreneurs lack collateral and little money circulates readily to serve as income for local companies? With fierce competition from international brands and little money circulating locally, the risk of the credits is high – consequently, the costs to insure that risk is high. It costs a lot to insure the credit risk, and the organizational costs to get the credit are high. This is because the amounts of money for each credit are relatively low, while the costs to evaluate the loan are not much different from those credits where volume of the credit is considerable. So, these costs are relatively high for small loans.[4]

Adding up these various elements makes the level of interest that is claimed high. In Brazil, we witnessed rates up to 25%. In 2022 Ghana's government created a development bank to help get finance at single-digit interest rates to entrepreneurs in transformative sectors, who are currently only able to obtain commercial bank credit that can *start* at around 20%.[5]

How the levels of interest affect the development of the local economy and the availability of jobs was shown in figure 5.8.

4 STRO once developed a method to make clients judge and reduce the risk by receiving this part of the costs. It's a pity we did not have the budget to test it in practice since this aspect of the high costs of credit needs to be reduced.

5 The smaller the loans, the higher the costs for administration, and ensuring the risk of defaults in a market with little money often starts at 6% and goes up to 20% and more. On top of that, the provider of the loan will claim a profit that is always higher than the depreciation rate of the currency against international currencies.

Poor economies lose money because people choose products “from elsewhere”

Another dynamic that makes less-performing economies lack money is that most of the little money entering these local economies is spent on products and services produced elsewhere. This preference of individuals and companies to purchase elsewhere is based on a mix of price, quality, image, and installment offers, as will be explained later on. (Inter)national suppliers win the competition with local (potential) producers. Initially prices might differ only little, but the odds get worse as the sales of the local companies dwindle while the fixed costs are still in place. Global companies have far better terms to pre-finance their production and finance their investments than smaller local companies. Sometimes, they can use their global network to minimize tax payments. Also, they profit from economies of scale since the plummeting price of transport facilitates the sale of products around the globe. They might need staff educated on a level that is hard to find in a poor economy. Their marketing and branding are stronger because they can invest more in these factors. They sponsor popular sports, for example, and thus build a positive image. A local company can’t compete with that.

With the polarization of income differences, another phenomenon makes money leave the underperforming economy: the rich people in poor economies are much more likely to consume imported luxury goods than their poor neighbors. Research by the Brazilian research institute IPEA into the impact of the Bolsa Familia, a type of child benefit for school-age children in Brazil, shows that the vast majority of that income is spent on housing and locally produced food. One can imagine the contrast with the spending of the wealthy in Brazil. They focus on cars, surveillance cameras, and luxury goods, many produced abroad. So, the more skewed the income distribution in an economy, the faster the money will be drained from the poorer local economies.

Yet another obstacle is the exchange rate. How that affects this situation will be dealt with in the next chapter.

A prisoner’s dilemma results in a fatal procurement policy

The local economy would undoubtedly thrive if businesses and individuals followed the example set by the anchors in Preston. Any additional costs incurred through this approach would be balanced by increased revenues and benefits for the entire community, resulting in an overall improvement in the quality of life for almost everyone. While this may lead to increased public spending, it would serve the long-term interests of the community better than consistently opting for cheaper alternatives elsewhere.

In contrast to community organizations that often prioritize the general welfare, companies and individuals find themselves entangled in what's known as a prisoner's dilemma. The choice of where to make purchases can be likened to a situation where two individuals are questioned and accused of a crime. If they trust the other, they stay silent and minimalize the verdict for both, while if they do not trust each other and lay the blame on the other, they end up with the hardest verdict.

The same logic applies to citizens who can choose to buy locally. Initially, this decision may appear to result in less value for money, translating into an individual loss. However, if everyone collectively makes this choice, the benefits of buying locally, such as increased employment, enhanced government income (through services), and long-term development prospects, would most often ultimately tip the balance towards a positive outcome. If each individual could be certain that everyone else would prioritize local purchases to the same extent, it would be evident that they would all benefit from the additional prosperity generated, as exemplified by the Preston model.

Figure 6.2
Local buyers face a *prisoner's dillemma*

The complexity arises when individuals realize that their personal gain might be significantly higher if everyone else buys locally while they themselves choose the cheapest option from outside the community. In such a scenario, most people might perceive this as unjust and opt to revert to purchasing from external sources as well. Consequently, the key to the success of this approach lies in making choices at a higher community level, where collective decision-making can align with the broader interests of the community as a whole.

Role Game

In a role-playing game STRO designed to delve into this topic, we assigned specific roles to all participants. Some were tasked with vigorously advocating for the collective effort to buy locally, while others had the option to either be persuaded or resist the social pressure to join in, although there was a prevailing inclination to participate. There was also a unique role assigned to someone who vigorously promoted buying local but, on an individual level, acted differently by attempting to benefit from both sides of the equation – buying from cheaper foreign suppliers while still enjoying the advantages created by others who were actively supporting the local economy. The players assuming this particular role justified their behavior with arguments such as, "I'm spending so little money that my actions won't make a significant impact," and "I'm currently facing financial constraints, so I'll need to purchase cheaper products from outside the region for now and join the collective effort at a later time." When we performed the role-play with a group of people, this behavior had a profound effect on the participants who had the freedom to make their own choices. Gradually, they all started gravitating towards buying the cheapest available products in the market, disregarding their own long-term interests in supporting the local economy. This outcome illustrates how individual actions and perceptions can be influenced by the behavior of others and how complex social dynamics can impact economic decisions within a community.

What occurs in the role-playing game closely mirrors what we observe in the real world: a tendency for individuals to opt for the cheapest available option and a strong feeling that many people only join when it is fair. These choices are often rooted in a belief that they do not know, trust, or possess the capacity to influence others' decisions. Moreover, from this perspective, choosing the cheaper option can appear to align with one's long-term interests.

However, the critical point is that people eventually recognize that distrust spreads when they fail to make a collective effort to buy locally. They find themselves in a situation where insufficient support is given to local businesses, hindering their ability to remain operational or enhance their offerings. Consequently, new jobs are not created, and even existing ones may disappear, leaving everyone worse off than they could have been had they made collective buying decisions.

Raising awareness of the advantages of a collective effort to buy locally and organizing such an initiative is a rarity. Preston is one of the few places where consciousness has been elevated, and the city council has effectively orchestrated the collective buying of local products and services.

It's crucial to note that the contribution to long-term wealth and the associated costs vary with each decision to buy locally. For this reason, a prudent buy-local policy typically does not aim for complete autarchy, where 100% of purchases are made locally. Instead, it seeks a balance that optimizes both local economic development and individual consumer benefits.

The prisoner's dilemma presents a challenging predicament that often keeps parties trapped in unfavorable circumstances even though the wealthiest individuals may not perceive it that way. Most often, people may not readily attribute the economic issues they face to a prisoner's dilemma. Determining which choices have led to an economy where importing becomes the predominant option can be a complex and elusive task. Competition tends to be the standard operating mode, and the most visible consequence is the limited income generation and the rapid outflow of money from the local economy. With meager earnings for local businesses and limited wage income for consumers, there is little opportunity for entrepreneurial individuals to establish and develop new enterprises in such an environment.

Governments often attempt to address this situation by promoting agriculture, and commodity exports, and/or by making efforts to attract purchasing power from outside such as through tourism. The subsequent chapter will delve into how these strategies impact economic development and exchange rates and show that successes might prove to work out unexpected.

A significant pitfall arises when a community's low local production and sales levels come to be seen as the natural state of affairs. In such cases, the local potential tends to be underestimated, and little thought is given to how that potential can be liberated for local consumption. A strategy of developing tools that can increase local production for local consumption is an essential step towards the basic condition necessary to develop exports that can adapt to changing market conditions. Such a strategy should focus on developing strong clusters of small local companies as the foundation of the economic pyramid, supporting export-oriented firms. These clusters serve as a reservoir for developing capacities, where feedback from local consumers enhances product quality, and supply chains remain within the same currency zone as the local community, mitigating supply disruptions.

Such economic development characterized by mutual economic interdependence fosters a positive bond among community members. Conversely, importing products can weaken social cohesion, potentially leading to its erosion and the destruction of social capital. Under those circumstances, individual survival might become the central concern, and perhaps one of the few remaining unifying factors is the shared sense that everyone is a victim of external forces, such as adverse climate conditions, among others.

Buying on installment sucks away patronage from local businesses

Still another dynamic why there is too little money-as-purchasing power circulating in poorer economies is utterly underestimated. We'll tell you briefly how one of us discovered it:

"When I first looked in the window of a store in Brazil, I thought, *Wow, that's cheap! This can't be true! Did I do the conversion from Reais right?* I looked more closely and discovered that each price tag also had a number: often a four, a six, or an eight. Upon inquiring what that meant, it turned out that the number on those price tags indicated the number of months that the amount listed above had to be paid. So, you had to multiply the amount by 4, 6, or 8 to arrive at the actual cost. Those prices were higher than I was used to but still within the range of what was likely. What struck me was how many products were for sale with an installment offer. Discussing this with local friends proved that a significant part of the monthly salary left after paying the necessary costs for housing, etc., was spent on installments. They did not even calculate their overall price but purely focused on the monthly expenses."

A staggering picture emerges if we digress for a moment to what buying on installment means for local businesses. Investigating this phenomenon, we were shocked by its magnitude: In many poor communities, the future salaries of most people were per-

manently tied up to installment obligations. And the items purchased with these installments are mainly constructed abroad. All these installment deals ensure money disappears from the economy the day following the salary payment. Once people buying in installments have paid these installments and their fixed costs, such as housing, very little money is left for purchases from local companies that cannot offer installments.

Local companies cannot earn much of the region's income because the income is already committed to installments.

Installment purchases are offered primarily for goods that can be recovered if the buyer defaults on his obligations. These vary from cars to electrical and electronic items. Such products are seldom produced in the region. Effectively, this means that the installment industry makes much of the purchasing power of salaries disappear from the local economy even before it has been used locally, creating and connecting supply chains. The money is designated to leave even before it is earned.

Small local producers themselves are unable to offer installments. They do not have the financial capacity and usually do not sell the type of products that can be captured if the installments are not being paid in time. The local producers – particularly those offering services – are thus artificially squeezed out of the market, and purchasing power circulates very little in the region. Buying on installment, which seems "only" a financial technology, is a significant reason why fewer businesses exist in less prosperous communities.

Businesses, such as those selling courses and meals, require immediate payment, if only because the meal or class cannot be recalled if people do not pay the installments. As a result, this financial technique causes a shift in spending from services to physical items, burdening the environment with a higher use of environmental resources. Consumption shifts to spending outside the region. Worse, it creates a situation that prevents the development of clusters of small and medium enterprises with a broad offer of services and products, reducing the capability of the region to create its development path.

We fear that this effect has become a dominant factor in many communities. On top of the outflow of interest payments related to installments, the switch in preferences it forces is a factor that stifles the development of local businesses and the entire region. We did not find international organizations and scholars working on development mentioning this as a significant threat to local development. Where is the research that provides data showing the impact on regional development? Might this perhaps be a blind spot among economists?

Many economists think that "the market" directs production to where it is most effective. They call that "efficient allocation".[6] But the moment the payment industry introduced this installment circus, it squeezed local services and locally produced goods out of the market. This difference in financing and marketing opportunities has nothing to do with market economy or efficient allocation. This is all largely a matter of power. Power to pre-finance the sale, to recapture the product, to have the scale to create marketing images, etc.

If our suspicion is correct, these advantages of global companies create a huge obstacle to developing a healthy local economy and harm the environment; at least, a global ban on installments would make sense. Such a ban might block one of the reasons why everyone in certain local economies becomes poorer, and fewer and fewer companies survive. In the last chapters of this book, we will learn how bottom-up initiatives in less-performing economies can (partly) prevent the loss of production and sales due to installments.

6 Economists like the idea of "efficient allocation." Allocation is the process of allocating resources to the production of different products and services. A reasonable allocation is an efficient allocation, and in economics, efficient means that resources are allocated to products according to the preferences of individuals. Thus, because of this process, the economy should produce the things people want, expressed in terms of their ability to pay for them. However, if you have more money than your purchasing power, you also have more influence over what is produced. It is market power and explains why free regulating markets are far from a fair way to allocate and distribute this power (Dietz and O'Neill, 2013). Besides, this concept might prevent us from considering the economy as an organic whole. As a result, we might miss something evident in, for example, understanding ecological systems: the carrying capacity of a natural system is made up of all those different ways and layers in which the contribution of solar energy is connected via plants to a complex chain of invertebrates and vertebrates. The greater the complexity, the greater the resilience to stress factors such as disasters. A system focused on fossil fuels can be efficient but vulnerable, and the development gets one-sided.

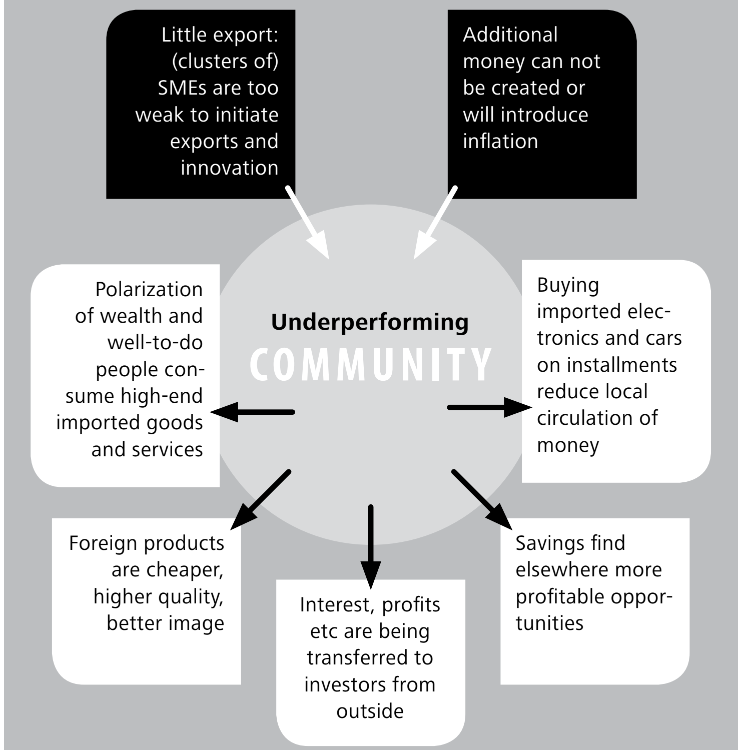
Savings leave for metropolitan areas: children follow their parents' investments

One more dynamic often to be seen in less-performing economies needs to be mentioned. That deals with savings from such local economies. Where are these invested? Not in the very region but in the metropolitan areas.

Profit defines the attractiveness of investments. Consequently, investments in less-performing local economies are not particularly interesting. So, it is no wonder local savings tend to be invested elsewhere. This reduces the money circulating in these communities. That affects the income of local businesses and employment opportunities. Worse, something else also happens: The lack of local investments depresses the price of the local properties. Even the properties of these very savers are affected negatively. And the chain of consequences does not end there because the low value of the local property and the faltering economy, in turn, means less collateral for loans. It all follows one another like toppling dominoes.

The local saver cannot oversee the consequences of his choice to deposit the savings in the metropolis. The cynical tragedy is that these investments are seen as wise. But the local values are eroded, and the children of the investors are effectively ("later") forced to look for work in a distant city where the economy is doing better, thanks in part to their parents' money.

Figure 6.3
All the inputs and outputs of money in poor local economies.



Just as well, the parents have no choice either. They must make an individual assessment within (yet another) prisoner's dilemma: only if every local saver chooses to invest locally, the combined gain of the profit, plus the development of the value of the local assets, might outweigh the initial difference in the profitability of investing in the "faraway" city. But, as is the case with this kind of dilemma, some people always want two for the price of one: profit from other people's local investments and reap the higher direct returns elsewhere. This now guarantees the worst outcome of this

dilemma, where everyone brings their savings to the faraway place with the highest returns.

Conclusion

This chapter asks attention to why so little money is circulating in underperforming economies. First, the international scarcity of money is ingrained in the dominant type of money. This scarcity is distributed as in a music chair competition and makes underperforming local economies end up in trouble.

The lack of money is also the result of two prisoner dilemmas: one in the procurement process and one in investing local savings.

On top of these aspects, the installment industry creates a financial tool that sucks money from poor communities.

The lack of money in the local economy has dire consequences for the development of a region. In a stagnant economy, hardly any progress can be expected if (potential) local entrepreneurs can scarcely get better options to sell. Under these circumstances, small and medium businesses will have difficulties starting or surviving. That hampers innovation, export, and the substitution of imports. The local economy is vulnerable to shocks in the global economy and to the impact of global pandemics. Also, the development of know-how and business management is affected.

In economies without enough options to earn money, entrepreneurial people – the kind of people who found companies where others can find jobs – will leave. And when entrepreneurial people move away, there is even less chance for dynamic local development.

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Chapter 7

The Impact of Exchange Rates

Introduction

In the previous chapter, our focus was on the reasons behind the limited circulation of money in impoverished economies. One of the factors we discussed was the preference of consumers, businesses, and institutions for imported goods and services over local ones. As we saw in the Preston chapter, this preference can initiate a downward spiral, causing a region to lose its ability to meet many of its previously satisfied needs. Adding complexity to this issue is the fluctuating exchange rate of the currency. The relative value of a currency determines whether imported products and services will be cheaper or more expensive than locally produced ones. Exchange rates can provide foreign or local companies with advantageous conditions for competing in both local and export markets.

In this chapter, we will delve into the role that exchange rates play in the availability of money. We will explore the concept of regional exchange rates within the framework of the national currency. The city of Wörgl, for example, implemented a sub-exchange rate by introducing a local payment system. This system encouraged the circulation of local currency through a 5% fee applied when exchanging vouchers for schilling at the Raiffeisenbank. Simultaneously, it provided people with confidence in the value of the vouchers, along with the option to use them at their nominal value for paying local taxes.

Exchange rates and availability of money at a country level

Many countries aim to achieve a trade surplus, but is it truly possible? Ultimately, aren't trade surpluses for one country equivalent to deficits for others? The optimal way to allocate production would be If all countries could increase their money supply to the level where all their capacities can be fully utilized while simultaneously ensuring that all trade remains balanced. To achieve this, countries would need to agree on balanced trade and have the ability to influence the distribution of production between products and services for domestic consumption and those intended for foreign markets, which are part of the trade balance. This necessitates the establishment of an international trade mechanism, such as the *Bancor*,[1] and the option to create additional currency to stimulate domestic production and consumption. This would result in a situation where economic growth becomes more circular, and international exchange becomes more focused.

This proposed approach sounds promising, but it would require a paradigm shift. Currently, countries prioritize exporting as the primary means to optimize their domestic economies and enhance the availability of purchasing power. There is no collective effort to reach a long-term solution that benefits everyone. If all countries seek short-term gains at the expense of others by stimulating exports, the outcome would be negative. Even the country winning the export competition and achieving a positive trade balance would not fully benefit because its trade partners would become impoverished and lack the means to purchase from the winning country.

1 The term "Bancor" refers here to the proposal by J.M. Keynes and E.F. Schumacher and not the alt-coin that was introduced some years ago.

A country with a negative trade balance faces challenges, with too little income coming in and excessive spending abroad. Such a country would struggle to tap into its full potential and may become a less attractive trade partner for others. For such a nation, increasing its currency supply to stimulate the domestic economy is not feasible. However, there is an exception to the rule that trade is a zero-sum game in monetary terms due to differences in the monetary system's power balance. This exception occurs when countries accumulate U.S. dollars to safeguard their own currency's stability. These stored dollars enhance the credibility of the national currency but must first be earned. Essentially, these dollars are withdrawn from circulation related to trade, allowing the USA to import more than it exports without worrying about trade balance. While the trade balance may be skewed, the financial balance need not follow suit. This benefits not only the USA but also countries that can achieve an export surplus, enabling them to modernize their industries, as seen in many Asian countries.

In all other scenarios, one country's surplus equates to deficits for others. Here lies a prisoner's dilemma that can lead to a rat race to the bottom. A country with low wages inadvertently compels other nations to keep their wages low to remain competitive. The winner of this competition gains enough currency circulation to manage domestic production. However, this wage-reducing race can lead to a global lack of income for potential buyers, triggering a perilous downward spiral – deflation that could ultimately result in a depression. This risk can be countered when the volume of credit continuously grows to compensate for the potential gap in demand.

The geography of money

Currencies, including their exchange rates, often encompass entire countries, and act as a currency zone. However, when we examine individual countries within a currency zone or specific economies within a country, we find that some of those economies have a net positive export balance while others do not. When people and production cannot easily reallocate, exchange rates of a currency (zone) tend to align more with the economic conditions of the economic dominant region (or country) rather than those of other regions. Consequently, there is a shortage of money in quite some regions.

Regional imbalances[2] become more pronounced when a country's economy is less homogeneous because the exchange rate of the entire country or currency zone may be significantly higher than what is suitable for regions or countries with a negative trade balance. This misalignment in exchange rates limits business opportunities for production and sales compared to what would be feasible with a lower exchange rate. The result: declining regional economies where employment (and the salaries related) do not follow the mainstream, leading to reduced spending at local businesses. Local production for local consumption get fewer chances. Consequently, these underperforming economies generate far less wealth than their potential capabilities would allow.

To reframe this issue, one could argue that the fact many regions must contend with ill-fitting exchange rates creates inefficiencies within the national and global economy. This has become increasingly important as transportation and money transfer transaction costs have decreased, with online retailers further accentuating this trend.

In April 2019, the International Monetary Fund released a report (IMF, 2019) highlighting the growing wealth disparities between regions within many countries. The IMF expressed deep concern about this trend and warned that in some countries, it could lead to explosive situations.

2 See Jane Jacobs on https://www.socialtrade.nl/english/publications

The data gathered by the IMF indicates that regional disparities are widening in nearly every country. The IMF attributes this to a structural flaw and a failure within the market.

It should not come as a surprise that this failure occurs, as many regions are compelled to operate with exchange rates that do not align with their economic realities. These economies are forced to use exchange rates determined by the better-performing regions of the country. This discrepancy is especially notable in countries where different areas exhibit somewhat different economic realities, resulting in certain economies having to cope with exchange rates that are too high for their specific economic circumstances.

Indeed, within countries, there can be substantial economic disparities between regions. This phenomenon is also reflected in the variations seen between neighborhoods within a single city. In many cases, a country's exchange rate is primarily determined by the economic performance of its most prosperous regions or areas.

Poor neighborhoods in big cities

In competition with other regions, the national exchange rate damages the competitiveness of the less-performing economies because it does not accurately reflect their situation. Businesses in these communities cannot compete within their community or other markets. When local companies lose in the competition, poverty and exclusion result. Does something similar occur in large cities? Almost always, a city procures less in deprived neighborhoods relative to the percentage of the population. Most of its procurement goes to the more affluent parts. Businesses in weaker neighborhoods can become more competitive if their economy would face a lower exchange rate. If the city's procurement team does not consider long-term development in its procurement criteria, it will buy elsewhere. Poorer neighborhoods will likely underperform, with a growing gap between them and the more affluent neighborhoods.

The trade imbalance in the weaker neighborhoods hampers trade with other neighborhoods in the city (and further away) and obstructs the development of opportunities. The differences between each of the more vulnerable neighborhoods are often minimal. They might have their own currency or share one currency, stimulating mutual trade while balancing their trade with third parties. In the book's final chapters, we will see that they could benefit from a common sub-currency.

The need for a fitting exchange rate is not rocket science. But why is there so little attention paid to it? Frankly, we are accustomed to perceiving the economies in one country as one economic entity. Indeed, they have the same legal system, the same taxes, and the same government. This makes it feel as though they should have the same currency. But what use is this to a region where economic development is rendered practically hopeless by a structural lack of money due to a non-fitting exchange rate based on the economy of other communities, because it would leave them with too little money to deliver demand for local producers?

Another reason this receives so little attention might be that regional decision-makers do not define the problem they face as initiated or at least reinforced by the currency system. And those who do are unaware of options to counter the problem.

Even within (large) cities, the differences in the economies of various neighborhoods can be that big leaving poor neighborhoods no chance to develop their potential. The Fomento approach in a neighborhood like Conjucturo Palmeiras in Fortaleza was successful because local production opportunities were underutilized due to the lack of money in that specific neighborhood (see chapter 4).

We fear that this is not only a geographical phenomenon but all too often a racial one as well. Social, racial, or linguistic groups often share economic conditions that exclude them from the

opportunity to develop themselves. Financial support by the government to these communities may be well-intentioned. Still, the transfers also mask how the development potential of such a neighborhood or group is hampered by an exchange rate that is too high for them while being comfortably low for the wealthier groups or districts. Support might be needed endlessly if the underlying problem is not solved.

Weaker economies suffering from Dutch Disease

The problem of non-fitting exchange rates is not just a geographical issue. Exchange rates can also become high when one sector of the economy is performing exceptionally well. In the 1930's, the Dutch economy suffered greatly during the Great Depression because the exchange rate of its currency was significantly higher than what the trade balance justified. Why did this occur? It was primarily due to financial markets' expectations that The Netherlands would be able to extract substantial wealth from its colony, Indonesia, once the global economy rebounded.

A similar situation unfolded in the 1960's when significant natural gas resources were discovered in The Netherlands. The income generated from exporting this gas led to an elevated Dutch currency. This high exchange rate rendered other Dutch export products expensive, forcing many companies out of the market and resulting in economic stagnation. Economists identified this phenomenon in resource-rich countries and coined it the "Dutch disease". While natural resources may appear to be a blessing, the disruption of exchange rates has adverse effects.

The traditional analysis of Dutch disease goes as follows: a specific sector (typically a commodity sector, e.g., natural gas) of a country performs exceptionally well in foreign markets, leading to a substantial demand for that country's currency. Consequently, the currency's value appreciates significantly, making it harder for businesses in other sectors to compete internationally.

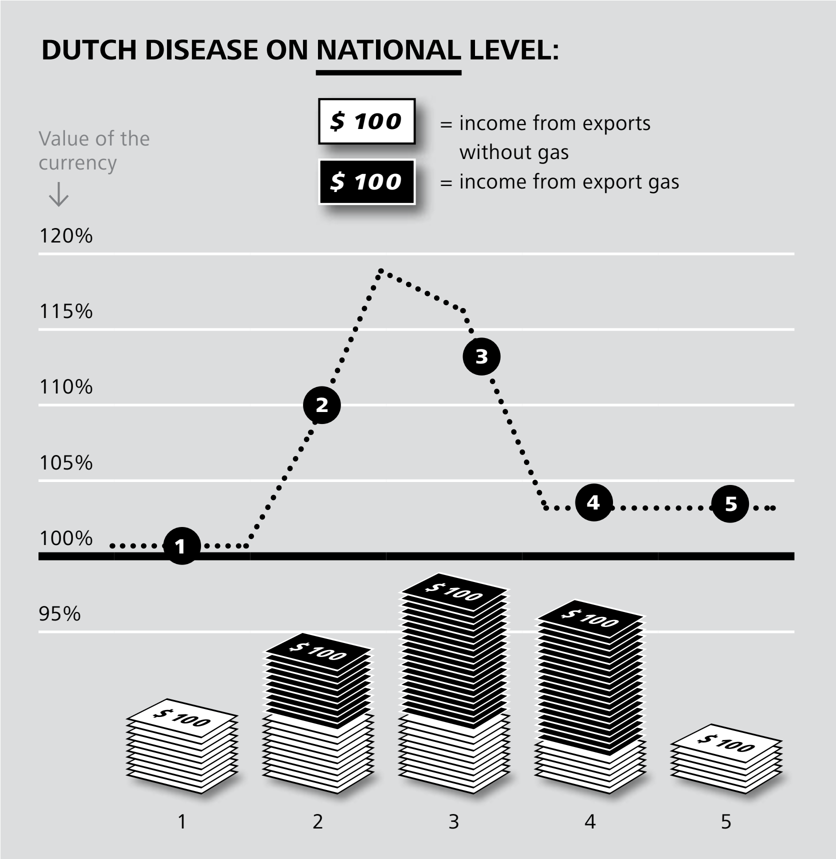

Figure 7.1

1) Stable value, before discovery gas.

2) The value of the currency rises due to foreign countries buy currency to pay the gas.

3) The more expensive currency makes local companies too expensive: more imports and less export.

4) The value of the currency stabilizes at a somewhat higher level; Export declines because the high exchange rate allowed foreign businesses to compete domestic businesses out of markets.

5) When the gas resources are finished the country has fewer businesses that can compete than before the gas.

This hampers their ability to rival foreign competitors, causing the non-dominant export sectors to gradually shrink. Eventually, these businesses either close down or relocate, causing these sectors of the economy to vanish, and the workforce undergoes retraining, ultimately losing the expertise needed to revive the former sector.

In many cases, dominant sectors offer higher wages. Uminsky and Nazarczuk argue, with several empirical examples, that the wage increases across all sectors due to the dominance of the new sector exacerbate the challenges faced by producers in other sectors. This amplifies the adverse impact of one sector's exports (e.g., fossil energy, tourism, etc.) on the currency's demand.

The geographical development mirrors this phenomenon, with regions being adversely affected by exchange rates that are too high for them. While researchers (such as Shao et al., 2020) have discovered that regions can indeed suffer from the Dutch disease, regional policymakers often remain unaware of the challenges faced by local businesses. This research primarily focuses on regions, but we are confident that similar dynamics occur within various social or racial groups. When the economy of other groups dominates, they also grapple with an exchange rate that is excessively high for their needs. Consider, for instance, many African-American communities in the USA and nearly all economies outside major urban centres.

Dominating cities

The Dutch disease can have a detrimental impact not only on the affected region itself but also on the rest of the country it influences. Take the United Kingdom, for instance, where it's evident how London's dominant financial sector and the vast metropolitan market pose challenges to other regions. London's influence on the exchange rate of the Pound is significant, and other regions must grapple with this reality. It becomes increasingly difficult for

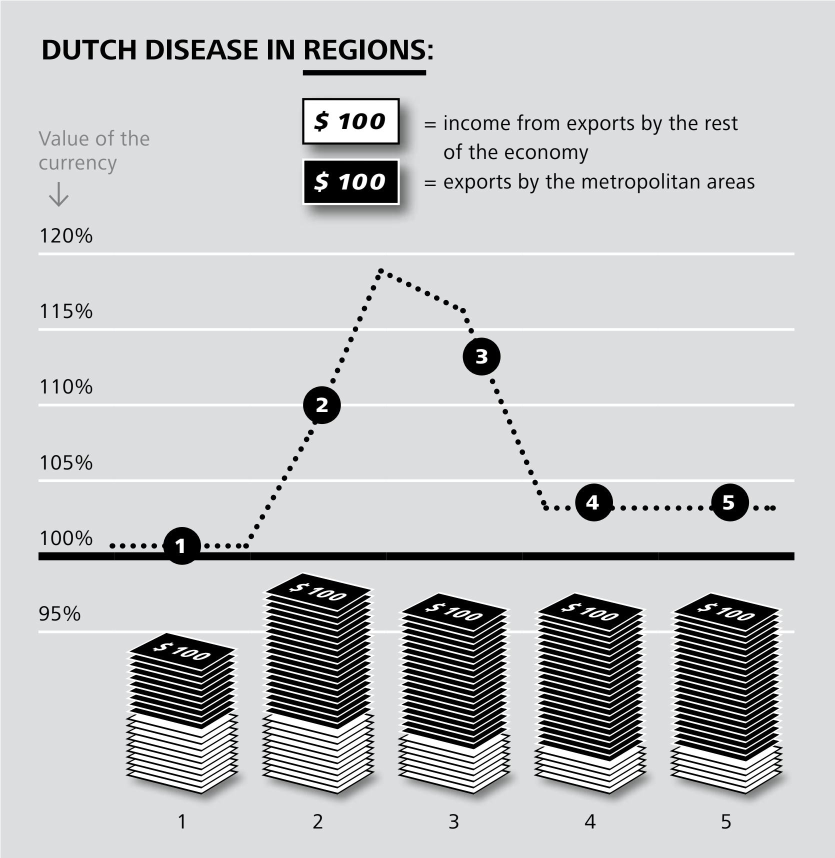

Figure 7.2

1) Stable value.

2) The value of the currency rises because metropolitan areas export more.

3) The more expensive currency makes the companies in less performing regions too expensive and local businesses lose markets.

4) The value of the currency stabilizes at a somewhat higher level.

5) Less performing regions enter a permanent depression.

them to establish or expand a diversified and active local economy unless they follow the examples set by Preston and Wörgl.

London continues to grow, attracting individuals from all corners of the country who can no longer sustain a reasonable livelihood in their native regions. Consequently, the public and cultural life of these regions gradually deteriorates. Simultaneously, in London, this growth drives housing costs to astronomical levels, leading to a widening income gap between those who earn through work and those who profit from real estate ownership.

A similar situation can be observed in Brazil, where the economy of Sao Paulo and the southern states wields significant influence over the value of the Brazilian real. Additionally, the oil industry further escalates the demand for reais, driving the exchange rate to a level that restricts the development opportunities for the economies in the northeastern region. People have migrated from impoverished areas, leading to the growth of Sao Paulo over the years, as it attracted millions from the impoverished northeastern states. A comparable trend is visible within the northeast, where cities like Fortaleza, Recife, and Salvador de Bahia draw people and capital away from rural communities.

Recognizing these challenges, STRO undertook research and development efforts in rural economies. This initiative was implemented in Yoroh, Honduras, and serves as the focal point of the next chapter.

Exchange rates in the Eurozone: a Greek tragedy

The economy of Greece has experienced two periods of suffering from the Dutch disease. Before the Euro, the dominance of the tourist sector drove the value of the drachma to a level that made it difficult for many companies to compete with imported products. After the introduction of the Euro, this effect diminished but was replaced by the crippling impact of the Dutch disease caused by the export surplus of European places such as Lombardia and

Paris. Along with other conditions, the trade surplus of these economies resulted in an exchange rate of the Euro that threatened the development of many other local economies, especially in Southern and Eastern Europe. These regions now have to contend with a relatively expensive Euro, both in the internal market for trade with other Eurozone countries and in worldwide trade. Economies like those of Greece, Southern Italy, and many others across Europe are feeling the impact. In these economies, the high value of the Euro discourages exports and favours imports, reducing domestic production for domestic consumption. Consequently, the number and turnover of local suppliers' contracts decrease, leading to increased dependency on long supply chains, which in turn causes setbacks during global crises, pandemics, and additional pollution.

For the EU metropolises, the situation is reversed. The exchange rate becomes artificially low for them because the weaker economies in the regions pull the exchange rate to a lower level than it would otherwise be. This makes life easier for them but introduces long-term risks, including industries becoming complacent, reduced innovation, and decreased investment. The market can only optimize the exchange rate when dealing with a homogeneous economy. As a consequence, people may need to relocate, either in search of employment or due to the rising cost of housing in the metropolises. However, this can be challenging due to differences in language and culture.

The imbalance in the Euro exchange rate between the northern and southern member states gives rise to the Dutch disease, which is clearly visible in the graph of the TARGET2 balance sheets of the European Central Bank (ECB). Following the Greek debt crisis, austerity measures showcased the impact of an exchange rate forced upon an economy. This eventually led to a political battle between representatives of the Northern EU countries and the opposition to austerity, personified by the Greek Minister of Finance, Yanis Varoufakis.

The setback of income generated by one source

Not every metropole dominates the exchange rate. For example, Montevideo, the capital of Uruguay, experienced a glorious period when beef was highly prized. The money generated in the countryside, often collected by large landowners, was spent in the capital. All that wealth made Montevideo a very attractive metropole. However, the city did not become wealthy due to its own achievements. Its prosperity lasted as long as the rural economy flourished and, to some extent, when wealthy Argentinians viewed Uruguay as a safe haven. Montevideo itself exported very few products and services produced within the city. When beef prices fell and income from rural economies dwindled overnight, Montevideo became much poorer. Its economy lacked resilience, or, more accurately, the city had hardly developed an independent economy of its own. The massive beef exports had driven the exchange rate to a level where no industries in the city could develop or survive. The city had grown accustomed to the income from the rural economies and had never developed the capacity to be creative and productive. Therefore, it lacked the tools to counter the situation when export income from rural products diminished.[3]

In many countries, the tourist industry significantly impacts the exchange rate and may influence economic development with the Dutch Disease. This occurs as follows: tourists must purchase the national currency, leading to a higher exchange rate. The increased value of the currency makes it more challenging for other sectors in that economy to export. Additionally, it provides foreign companies with an advantage in gaining a market share in the country's national market. For many countries, income from tourism represents a substantial portion of the demand for

3 Jane Jacobs attributes this problem to supply regions.

their local currency. Even in countries where the demand for the national currency by tourists is less than 10% of the total export, the Dutch disease's effects can still be considerable.

The key point is that other export sectors have little in common with tourism. The growth in the tourism sector can grow but will have fewer spill-over effects on other export opportunities. Tourism undoubtedly offers excellent opportunities for countries and local enterprises to earn money, drawing the attention of enterprising individuals. Subsequently, the economy becomes dominated by the revenue generated by tourism, causing other productive sectors to contend with a strong currency. Import substitution scarcely occurs, and clusters of businesses weaken while these sectors need to be robust to nurture and support innovative producers, forming the foundation for future exports.

Is it bad if the economic development gets focused on tourism? There is a possibility that tourism might collapse one day due to changing tastes, a global crisis that reduces holiday spending, or a pandemic, leaving the economy without a diversified fallback option. This was evident during the COVID pandemic (Milesi-Ferretti, 2021), when countries and regions were forced to borrow more from abroad to compensate for the considerable loss in tourism revenues. One positive aspect is that the tourist industry's revenue is broadly spent on services, including real estate construction and cultural products. However, most of these expenditures do not create the kind of platform that can facilitate other exports. Tourism serves as just one example. The same vulnerability can apply to a country specializing in a specific type of agriculture. Even remittances can lead to excessively high exchange rates in a country, blocking the competativeness of many local companies.

Economies suffering from the Dutch disease have limited resilience and lack a backup plan. This is expected to become an even more significant problem as countries grapple with the effects of climate change.

The setback of focusing on exports

Most ideologies have a core of truth with a larger story around it, which is not always entirely related to the part that is true. For example, a correct assumption is that a country or region with hardly any exports might be underdeveloped. However, one cannot conclude from that fact that the opposite is accurate and that only exports solve regional problems. It certainly does not legitimize pampering exporting mega-corporations, even if those will augment the inflow of hard currencies, which might result in the opposite if the incoming money is used for imports. In contrast, the currency becomes more expensive, and the exchange rate becomes detrimental for many local businesses.

In the Brazilian state of Bahia, monopolistic sugarcane producers now own land initially owned by many small farmers. Huge machines work there 24/7 to harvest the crop, and trucks are coming and going. However, what does this export contribute to the local economy? One shouldn't be surprised if it's even less than what the small farmers who used to operate there together contributed, especially since only a tiny part of the money the sugar companies earn will be spent on local products.

The other side of the coin is formed by countries with broad and strong clusters of SMEs that support a vibrant economy. Cluster policies have been integrated into the European policy agenda and lie at the core of the European regional specialization strategies (RIS3) (Konstantynova et al. 2017). The idea is that such clusters make it possible to respond dynamically to changing global market demand, providing a healthy base for exports. Replacing many small businesses with a few export-oriented businesses, as happened in Bahia, does not strengthen but weakens those clusters. The focus on exports by many governments in poor economies provides rich countries with cheap raw materials and provides the small caste of the rich in underperforming countries with money that makes a Western lifestyle possible (Amin, 1973; Kvangraven, 2021). This sums up several other reasons why a strong focus on export is often not wise:

- Earlier, we observed that under the current circumstances, stimulating exports by offering favourable conditions to firms from elsewhere threatens to devolve into a *race to the bottom*, where each region attempts to shift the adverse consequences of inadequate funding onto others. This, however, implies the risk of collectively moving toward the worst possible outcome of the prisoner's dilemma.
- Furthermore, this approach exclusively benefits economies that *already* wield significant influence in determining the national exchange rate.
- Concentrating on specific export sectors may lead to an exchange rate that *triggers the Dutch disease*, hindering the broad development of local qualities. Even a focus on tourism can have such an impact.
- The tragedy of this policy, as pursued by regional administrators, lies in their *acceptance of the shrinking of local production* for domestic consumers. This decline is not due to people preferring to avoid purchasing local products and services but rather because this production is being squeezed out of the market. This results in a situation that ultimately benefits no one.
- Trade and production chains have increasingly globalized in recent decades. This exacerbates the vulnerabilities during global economic crises and supply disruptions, such as pandemics (like COVID) or blockages of essential sea routes (such as the Suez Canal). The globalization has resulted in a world system that has become far from resilient. Furthermore, the transportation of raw materials across the globe does not support environmental sustainability.
- An unintended consequence of the focus on exports is the diminished attention given to the local economic ecosystem of small companies, potentially weakening it. Additionally, when local clusters of companies weaken, the likelihood of innovation, which is essential for gaining export markets, decreases.
- Finally, income from exports in poor economies typically accrues to a small group of individuals. This not only fosters nepotism and corruption but also prioritizes the consumption of luxury goods, causing money to leave the country. Russia serves as a modern textbook example, with its increasing focus on exporting energy and grain. The elite in such a country sees increasing exports as the best means to maintain its standard of living.

Conclusion

A single currency designed to cater to the needs of various economies presents several arguments in its favour. However, these arguments should not blind us to the associated drawbacks. Conversely, there are also arguments favouring the use of distinct currencies for each region or country, especially when their economic characteristics differ significantly from the economy that determines the exchange rate of the currency.

In this chapter, we have discussed some of the drawbacks of a one-size-fits-all currency for weaker economies that are compelled to use a currency with an exchange rate ill-suited to their circumstances. The prevailing paradigm that exchange rates cannot be tailored to local conditions has restricted a thorough examination of the consequences of this fixed reality.

When the exchange rate is excessively high, local customers are more inclined to opt for products from other regions because the price-to-quality ratio of those imported products and services becomes more favourable. Consequently, local businesses lose potential customers. Simultaneously, these local entrepreneurs can only attract customers from within their own region because the exchange rate renders their products unaffordable to customers outside their region. This leads to the erosion of local production and expertise, and in certain economies, it prevents them from gaining a fair opportunity to thrive, limited income is generated, and consequently, there is little purchasing power available to support local producers. As a result, the region's economy falls further and further behind regions where the exchange rate is more reflective of reality. These economically active regions begin to exert even more influence over the national exchange rate.

At a certain point, the significance of these disadvantaged regions in comparison to the most economically prosperous regions reaches a tipping point, making it highly unlikely for political attention to be focused on the underperforming economies. This mechanism is:

1. **The value of the national currency is predominantly determined by exporting regions or sectors.**
2. **These regions or sectors contribute a portion of their revenues in solidarity with the less economically prosperous regions. While this is a sympathetic gesture, they often fail to realize how it hinders development in the economies they are trying to support. Furthermore, it prevents the successful regions from optimizing their own development.**
3. **This support channel directs demand towards enterprises located in the more affluent regions or even from foreign sources. Consequently, the exchange rate traps these less prosperous parts of the economy in a vicious circle: the limited available funds are expended on products and services outside the community. Additionally, it becomes increasingly challenging and expensive for local anchor institutions to make local purchases.**
4. **As a result, this situation contributes to the growing polarization between regions, as indicated in the aforementioned IMF report.**

The infrastructure of a healthy and broad base of small and medium-sized businesses in regions facing a persistent trade deficit weakens over time. This sets in motion a negative cycle characterized by decreasing income and reduced local spending within these communities, with consequences extending to other communities within the same country. These ripple effects result in reduced export capacity for the country as a whole. Moreover, weaker business clusters hinder the possibility of substituting imports, as the volumes are often insufficient to nurture alternative local suppliers.

On a national level, an imbalanced trade equilibrium compels countries to sell their raw materials at lower prices. As we discussed in the previous chapter, this often fails to promote the development of most economies due to the Dutch disease effect. Nonetheless, it does provide wealthier countries with access to cheaper materials and products. Their growth and consumption model is not globally replicable (Hickel, 2020). The large-scale sale of raw materials not only triggers the Dutch Disease within the economy but also negatively impacts the global environment.

Countries, as well as regions, that consistently maintain a positive trade balance tend to develop an imbalanced economic structure. They may fail to invest capital in domestic circulation and become reliant on an unsustainable reality. Meanwhile, other regions witness the erosion of their domestic production and a consequent decline in living standards.

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Chapter 8

Gota Verde: An Example of a Monetary Approach for an Integral Development

Introduction

After the chapters that focused on analytical aspects, we again focus on a practical example. The Gota Verde project was designed by STRO and executed by local partners in the Yoro province in Honduras. In this project, we stimulated the availability of money in two ways: import substitution and a commodity-backed local means of exchange. Gota Verde shows how a local economy where little money is left can start an integral development approach.

An essential item in that approach was the substitution of imported fossil fuels for locally produced and processed bio-diesel. The idea was to change the trade balance and keep money longer in the local economy. There is an excellent reason to choose this approach above stimulating export. Think of where the additional money would end up. The export income most often circulates only a little in an underperforming economy because it is earned by a few wealthy people who spend most of it on imported goods. The Gota Verde approach focused on making money circulate between local actors. Small farmers producing biofuel will not spend the income from bio-oil production on speculation or imported luxury goods. They will invest it in their own business, in capital goods that increase productivity, or in ways to reduce the cost level for domestic production.

In parallel, Gota Verde's objective was to strengthen the clusters of local companies, increasing the range of services and products. This was both to recapture the domestic market and to extend local production in a way that would increase income and, thus, options to buy.

The project had to be performed in an environment that lacked organizational structure, markets, and access to an appropriate credit scheme to pre-finance the planting of the Jatropha trees and additional business activities. STRO was lucky to be able to bring together the people and organizations that could deliver what was needed.

Yoro: testing approaches to strengthen the local economy in a poor region

Our idea behind Gota Verde was to test if locally produced and processed biofuels could replace imported fossil fuels while introducing a local means of exchange and actively raising community awareness. Another aspect was community-supported business startups to create synergy. Would the community pick up the challenge to support innovative economic and technological approaches to make a common effort to increase local economic development? Examples of a type of housing were introduced that were mainly constructed with local resources.

The Yoro province of Honduras is one of the poorest regions in Central America. When we arrived in 2008, we witnessed that developing the (limited) potential was frustrated by a failing/lacking monetary organization. The climate, geographic, and social conditions in Yoro are not very favorable for incorporating the local economy into the international markets. Many places in Yoro were difficult to access and lacked centrally provided electricity. In these areas, diesel engines were employed to generate

electricity. Fossil fuel was also used for tractors. The precarious conditions in rural Honduras made poverty alleviation a priority in the Gota Verde project. Even a slight increase in income would improve living conditions considerably, especially for subsistence farmers. The conditions (illiteracy, lack of infrastructure, demanding access to loans, etc.) made the subsistence farmers risk-averse. Therefore, competitive production of biofuels for the regular national market with its fluctuating solid prices was no option. Community sense, however, existed, which made us believe that small farmers might be willing to produce biofuel for their own use and the direct local market.

We developed Gota Verde as a broad integral approach containing various subprojects:

1) **The cultivation of Jatropha trees that produce nuts with pure plant oil in a way that does not compete with land use for the production of food.**
2) **Develop local know-how to press and process the oil and to adapt diesel engines to the use of biofuel.**
3) **Create examples of building designs and materials that allowed the construction of quality houses using local materials.**
4) **Awareness building in the community on the impact of consumer choices.**
5) **Coaching entrepreneurs to build new businesses that would meet local demands.**
6) **The introduction of a local means of exchange to develop a stronger SME base in the community.**
   Using a local currency facilitates community support for new businesses and replaces the need for credit in the national currency.

The project was made possible through subsidies from the European Commission and DOEN and HIVOS, two large Dutch private donors. Their money was used to finance credit to farmers to invest in introducing oil-producing trees and buying the materials needed. The funding was also used to finance the cost of the introduction of appropriate technologies and knowledge concerning the procedures of how to grow Jatropha, process the oil into biofuels, and organize a local currency scheme.

How a different type of money can support the organization of the local economy

The name Gota Verde, “green drop”, referred to the most visible element of the project: replacing (imported) fossil fuels with locally produced biodiesel. The Gota Verde initiative differed in several aspects from many other biofuel initiatives:

- **The oil was not for export but for local irrigation pumps, tractors, agro-industrial equipment, and vehicles used locally in Yoro.**
- **The trees were not planted in huge monoculture plantations, competing with food production. Most trees were used to create living fences or in anti-erosion initiatives. At some point, the farmers decided to use the trees to provide shade beneficial for the corn.**
- **Production of the trees was managed by many small and some medium-sized farmers and their families.**
- **The owners of the processing enterprise were not anonymous overseas shareholders; instead, they were the very local farmers who cultivated the oil-producing trees on their lands.**

The general objective of the Gota Verde project was to showcase an integrated development approach focused on improving local production and trade for local consumption. There was also a need to test various elements of the project:

- **The technical feasibility of small-scale biofuel production for local use.**
- **The technology to enable the use of pure plant oil in diesel machines.**

- **If housing could be improved by designing quality houses based on local resources.**
- **The use of locally available resources and the feasibility of community-supported credit to make better use of these.**
- **The potential of swift preferences towards locally produced products and services.**
- **The option to gain trust for a community currency and the hope that this local money could facilitate community-supported credit. That is, to help startups earn a local income and compensate for the resources they used from others.**

Let’s have a closer look at the project.

Biofuels to replace imported fossil fuel

Economic mapping showed that approximately 45% of the money spent on imports in the province was used to pay for fossil diesel fuel. The idea was that by replacing part of these imports with local bio-oil using Jatropha seeds, the available money would circulate more often in the local economy. We also hoped that the community’s involvement would help to reallocate the dollars that were until then spent on oil imports to finance investments in local production, recapturing, and extending the domestic market. The Gota Verde project aimed to maximize the impact on the local economy of biodiesel production, processing, and use. This was done by implementing an innovative local currency scheme and by reusing the residues of the pressing process, as well as a dedicated credit scheme for the farmers to cover the costs of planting the trees for the first years that the trees needed to grow before they yielded enough to repay the loans.

Jatropha

The agricultural component focused on promoting, training, and providing advisory services to farmers regarding the planting and

Local farmers innovated and planted the Jatropha next to the corn to provide shade, while the roots were non-competative for water because the Jatropha roots grow deep.

care of Jatropha, a tree that produces oil-containing nuts. Several years ago, Jatropha gained significant attention until it was found that commercial production required water and nutrients at a level that competed with food crops. We selected Jatropha as an excellent option for hedges to protect crops from animals due to its poisonous nature. Additionally, it was planted on slopes prone to landslides.

During the project, farmers discovered another use for Jatropha: planting it between rows of corn to provide shade for the corn plants. The trees start yielding oil-containing nuts from the third year onwards, and a substantial yield can be expected after five years.

The competitiveness of Jatropha compared to fossil fuels depends on various factors, including transport costs and the option to process the oil locally. Another significant factor is the world oil price. If it falls below 80 dollars per barrel, Jatropha oil becomes too expensive to compete. Similarly, increasing wages in the area can make nut collection and processing costly, especially for trees growing in hedges and slopes where manual harvesting is often necessary.

Utilizing by-products is crucial. Most of the nutrition Jatropha trees need can be found in the leftovers after oil extraction. In Gota Verde, our plan was to use these leftovers once yields increased after the first five years. They would be used to produce methane gas with left-overs that are ready to be used as fertilizer. From the beginning, leaves were used in containers where drinking water was stored. These leaves are toxic to bacteria and insects, while the poison evaporates rapidly when the leaves are taken from the water.

Transferring knowledge to farmers on dealing with oil-producing trees required training and motivation. The Honduran Ministry of Agriculture supported the project by sharing their expertise.

Bio-diesel production

The diesel project comprised three components: agricultural, processing, and engine adaptation. An agricultural enterprise was established, along with the necessary knowledge on how to manage such a business.

The processing enterprise served as the core of the biofuel chain. This component, apart from its legal establishment (BYSA), involved promoting farmer shareholdership, organizing the enterprise, creating business plans, calculating costs for various crops and end-products, and providing management training.

PPO (PurePlantOil) in diesel engines requires adaptation of the engines that use it. Lower fuel costs compensate for this initial investment. Transferring the skills needed to adapt the engines to local technicians was the objective of this component. During the training, students and teachers at the local technical school adapted the engines of six vehicles or generators. The cooperative of farmers and some farms used cars, trucks, tractors, and generators.

Eco-houses produced with local labor and local construction materials

Another subproject of Gota Verde was the construction of environmentally friendly houses using local resources, known as "ecocasas" in Spanish. Gota Verde showcased houses that could withstand the most disastrous weather and natural disasters, such as storms and floods that frequently occur in the region. The houses were constructed using local materials that were termite-proof. Another goal was to create houses with improved internal ventilation. Comfortable (smoke-free) kitchens and sustainable solutions for wastewater were implemented. The Ecocasas concept encompasses a wide variety of construction and housing practices that do not harm the environment and utilize locally available

resources, including energy, water, materials, and human capacity, thereby reducing costs sustainably. Additionally, the project involved showcasing the vegetation around the house, such as fruit trees, serving multiple purposes such as providing food, improving health, offering shade, cleaning wastewater, and reducing the environmental impact in terms of energy and water usage.

The houses were constructed using locally produced adobe blocks and bamboo, both of which are eco-friendly materials. The Ecocasas project aimed to promote the concept of ecological housing by identifying families interested in building their own houses with some or all of the environmental components. Specifically, this mini-pilot project aimed to:

1) **Achieve a cost-effective and applicable design suitable for the local environment;**
2) **Construct two prototypes of ecological houses tailored for two different environments (totalling four prototypes);**
3) **Evaluate the anticipated benefits of ecological houses.**

The houses contained the following features:

- **Drinking water system:** Rainwater was collected through gutters on the roof, which, passing through a filter, fed water to storage at ground level and hauling in buckets. There was also an elevated tank with a manual pump. The water stored in this way could be used for showers, dishwashers, sinks, toilets, and hydraulic closure latrines. Additionally, the water could be heated using solar energy and then circulated for showers or in the kitchen. To prevent bacteria, Jatropha leaves were used.
- **The use of local materials:** Lower costs were made possible by building the walls with improved adobe or wood, which also maximized the use of local labor. Houses constructed with improved adobe represented savings of up to 37% compared to

concrete blocks and 13% compared to rough brick. There was also a showcase of houses built on poles, meant for areas prone to flooding or in places with very high temperatures. This design facilitated vertical air circulation, making the house cooler.

- **Sanitary services:** In cases where there was no access to the public sewage network, composting latrines provided a hygienic and practical solution for the disposal of excreta.
- **Greywater system:** Water used from showers, dishwashers, and toilets was reused to irrigate plants and crops through a biodigester that purified the water.
- **Energy:** In cases where there was no access to the public electricity network, an improved stove was constructed, saving between 50% and 60% of firewood, producing less smoke, and operating faster and more efficiently than conventional stoves.
- **Ventilation:** Windows were strategically located to receive more wind and less sun exposure, contributing to the freshness of the house. Ventilation grilles were also installed in the false ceiling and on the house floor, which could be opened or closed like windows, allowing vertical airflow through the house and keeping it cool on hot days.

Awareness of the impact of buying local combined with an incubator for start-ups benefiting from community supported credit

Another element in Gota Verde was an effort to mobilize awareness of how consumer choices in buying could create or destroy local businesses. This led to the discovery of how the productive potential of the community could grow and what this would mean for consumers. STRO's approach was based on the NEF methodology of "Plugging the leaks".[1] It raised awareness and

1 https://neweconomics.org/uploads/files/plugging-the-leaks.pdf

facilitated a joint search to better understand problems and options to improve the community's lot. We adapted it to fit the local context in Honduras and the Gota Verde project, and called it *Apreciando lo nuestro* (APLN – Appreciating What Is Ours).[2]

During the training, participants were requested to think about what kind of new enterprise they would like to start. They discussed the needed investments and how others from the community could provide necessary resources. Another essential aspect was considering what would be needed in terms of clientele and what potential clients could promise.

Next, all participants were asked to answer two questions:

- **What underused resources did they and their relatives possess that could be used by the new companies instead of financial investment? These potentials could then be used as community-supported credit for the new businesses. For example, participants could offer a place to do the job, or lend a tool. But also asked one of their friends or relatives that could offer the place or the tool. Alternatively, they could borrow an instrument from someone in the community, to be repaid or compensated with the local money described in the next paragraph.**
- **What products and services would they be able to buy from the new companies? Participants discussed changing their habits, such as switching from drinking Cola to locally produced and offered fruit juices over a long period.**

The group mapped potential flows of income and expenditures in the community where people who wanted to open a business would start. They considered what support and clientele these new businesses could expect and how the earnings could

2 https://issuu.com/apreciandolonuestro/docs/fichas_proyectos_apln/1

be used to link people as investors and clients to the new businesses. They studied how a local means of exchange could facilitate these transfers, how the income would circulate, and what loops needed to be closed to make the money circulate within the community without creating a stagnant pool. This understanding emerged of the limited available funds and how a local means of exchange could effectively smooth the circulation.

Additional means of exchange for the community

In the awareness training, attention was given to introducing a means of exchange. This financial component consisted of two areas that partially overlap: (a) a credit scheme and (b) the creation of a local means of exchange. In 2008, a participatory process took place to determine the name and design of the vouchers. The name Peces ("fishes") was chosen. This refers to the extraordinary (and scientifically unexplained) meteorological phenomenon of small fishes falling from the sky that only takes place in Yoro. The Peces aimed to increase the impact of the "new oil wealth" on the local economy by stimulating the farmers' earnings to be spent locally and boosting the diversification of local production by organizing the local resources better. As such, the Peces were introduced to connect local demand from consumers and business owners and local supply from local farmers in Yoro. The enterprise BYSA (owned by the farmers themselves!) introduced the vouchers as interest-free credits, backed by the oil from the seeds, processed it into biofuel. The vouchers brought more means of exchange focused on the community into circulation. In an environment where so little money was available, making 10 dollars was a fortune; the impact was guaranteed. The new currency reduced financial costs and increased sales for BYSA while enhancing the effects of the biofuel chain on the local economy. The additional money enabled the linking of those who offered their assets to the new companies to these companies, which were expected to get paid

mainly by vouchers. The local exchange medium was issued by BYSA and backed by its inventory and the obligations of the farmers who needed to repay their debts.

The voucher system was combined with promoting local consumption and realizing community-supported new businesses. It stimulated local production, leading to a virtuous development circle within the local community. Future claims on biodiesel sales backed the system through the inventory of the biodiesel production cooperative and repayments of credits in vouchers to the new companies. At some point, the slow start of the biofuel production process – the trees needed to grow some four years before they provided serious yields – introduced the need to limit the emission of the vouchers. This was partly solved by temporarily backing the Peces with donor money.

By the end of January 2010, 26 formal businesses in Yoro accepted the currency, and a total of 107,646 Peces (almost 6,500 dollars) was emitted between February and December 2009, of which approximately 39,000 were in circulation on December 31, 2009. These amounts are considerable in a society where many people live in self-subsistence, and the national currency enters and leaves rapidly. The enterprises used the Peces to buy from each other, to buy biodiesel from BYSA, to give as change for purchases in Lempiras (the national currency), and to partially pay wages to their employees. Some of the Peces were converted back into Lempiras. FUCOSAO (a local non-profit organization that introduced sustainable organic farming techniques into farming communities in the region) converted Lempiras into Peces to purchase construction materials at a local hardware store that gave special discounts when payments were made in Peces. FUCOSAO also introduced Peces into the local loan and saving schemes (Cajas Rurales) they supported. Finally, BYSA's (farmer) shareholders received loans that were partially in Peces for purchases of agricultural inputs.

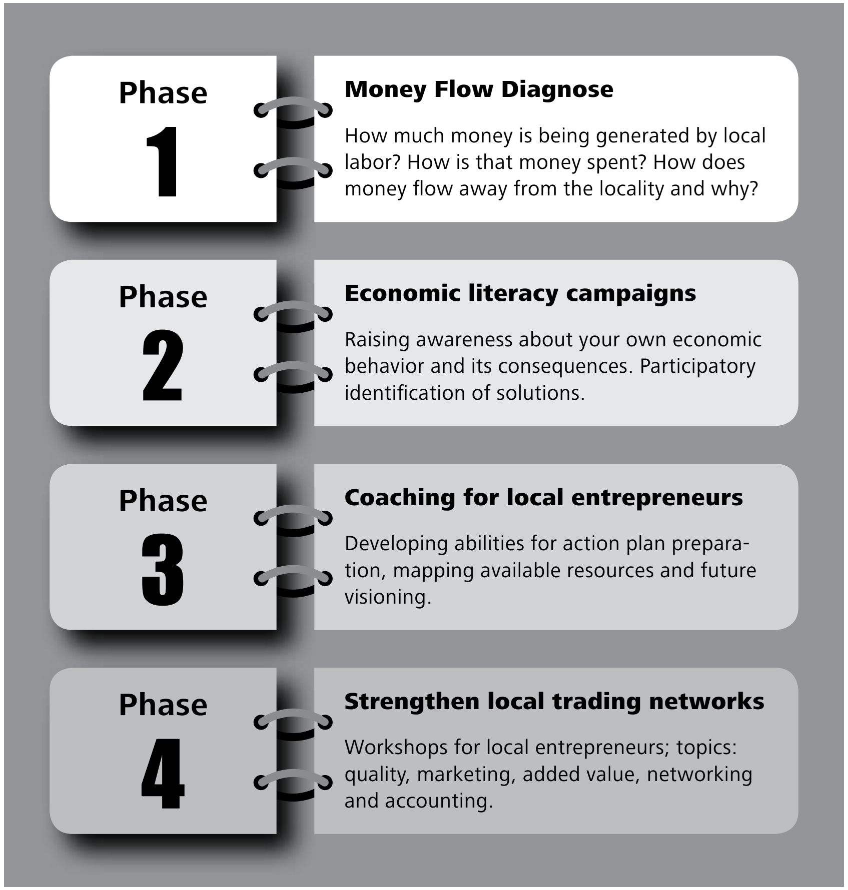

Figure 8.1
Bio-diesel production and these four steps formed a solid base for the introduction of a local means of exchange in the form of vouchers.

Business owners were overwhelmingly positive about the Peces, as reflected in the following words when the Peces was investigated by the Central Bank of Honduras at some point in time.

> "This has given me nothing but good results in my own business. I'm responsible for my own actions as a business owner, and I have no fear and no doubts about the legality of the system. In case you (the Central Bank) decide that the Peces can't circulate in Yoro, I can guarantee you that we will start a new system again, by ourselves."
> – **Iris** *(small business owner in Yoro)*

Impact on the local multiplier

The number of times the money circulated in the community, the local multiplier, increased up to four. This led to a remarkable increase in income. Local participants stated that they had increased their sense of entrepreneurship through APLN, becoming more aware of the influence of their procurement choices on the functioning of the local economy (62% before and 80% after APLN), as well as more confident about having enough resources to start a business (25% before and 60% after APLN). Up to 90% of the new businesses set up by people relied on community credit, enabling each other to use existing resources (out of 133 initiatives) and significantly reducing the need to access credit in dollars.

Testimonials and Behavioral Change Monitoring
When looking at the testimonials and the study of the behavioral changes, we can see that these communities in Yoro made impressive progress in the transition towards resilience and self-sufficiency.

"I always wanted to make my ideas come true but nobody would pay attention. The institutions were bringing what they thought would give us benefits. This experience is different because it worked based on what I want to achieve."
– **María de Jesús Díaz** *(traditional Cheese Producer)*

Gender

APLN was successful in addressing two main barriers that disproportionately affect more women than men in Latin America when starting or expanding a business: (a) limited access to business contacts and (b) cultural norms on entrepreneurship, which impact women's confidence and self-esteem. The promotion of workshops raising community awareness and complementary networking workshops, where, on average, more than 65% of the participants were women, helped women expand their network of business contacts.

Among clients primarily supported by their neighbors (constituting 30% of all entrepreneurs), the majority were women and young individuals. Through coaching sessions, participants boosted their confidence levels and cultivated a "can-do" attitude, breaking some of the cultural barriers women face when initiating entrepreneurial activities. The method's particular relevance for women is demonstrated by the fact that women led 70% of the new businesses created through APLN. Furthermore, in the long run, women outperformed their counterparts, as most of the initiatives that continued after the direct support from STRO ended in 2010 were led by women (80%!).

"We realized that moving forward is possible, we just need to think positively and get into action (…) we never thought that in such a short time we would reach such success, thus, realizing that we have many resources, that before were not valued."
– **Clementina Hernández** *(president of a coop of Women micro-enterprises of handcraft)*

Conclusion

Several components of the integrated development approach that were tested in Yoro can be considered successful. The Jatropha trees, planted in hedges on erosion-prone slopes and as shade providers between rows of corn plants, initially had low yields in the early years. However, once the trees bore nuts, the pressing process proved feasible, and biofuel derived from these nuts was successfully used in diesel engines.

The examples of eco-casas, houses largely constructed from locally produced materials, were successful and led to replication. The introduction of Peces (a component of the project) was well-received, and community-supported start-ups exceeded our expectations. Local farmers formed a cooperative to which the loans were transferred, and people had a clear idea of how to proceed. When the grant enabling STRO to fund its advisory role ended, we were confident that local organizations could sustain the project. Our hopes were high, but circumstances took an unforeseen turn.

Shortly after our departure, the region became a battleground where drug militias seized control. Young people, starting from the age of 16, were coerced into joining the national army or drug militias, and many chose to flee to the US or other countries. With key personnel fleeing, the Gota Verde project came to an abrupt halt. This tragic turn of events raises questions about the project's long-term development.

Questions linger: What would have happened to the nuts if the oil price had dropped below $80 a barrel? Would collecting and processing the nuts still have been feasible? If so, could nut collection have become a source of survival for the poorest? Crucially, would the community spirit have been strong enough to ensure that the money saved by substituting fossil fuels was used to import capital goods, or would it have been diverted to additional consumption goods not produced in the region? Would the sense of community we observed during the establishment of new businesses have persisted, or would it have dissipated, allowing the prisoner's dilemma to resurface?

This chapter underscores the significance of context when applying concepts explored in the preceding three chapters. There are no one-size-fits-all solutions, and we must avoid such thinking, especially given the harm caused by such beliefs in the past. Communities vary widely, just as the individuals within them do. The economies, structures, institutions, and environments surrounding these communities also differ greatly. Nevertheless, applying the logic of the analyses and assumptions discussed in the previous three chapters proved valuable, even in the face of these diverse contexts.

Chapter 9

A Local "Sub-Currency" to Boost Underperforming Economies

Introduction

What is required to stimulate local production for local consumption and establish robust clusters of independent companies? The preceding chapters argue that both new and existing enterprises need at least enough money locally available to facilitate potential production and consumption within the local community. One way to achieve this is to condition money in such a way that it will be used for local purchases more often, before it flows out of the community.

In Chapters 6 and 7, we explored the causes of the shortage of money as tool for organizing specialized production and trade. The population is caught in a prisoner's dilemma that prompts them to purchase imported goods due to their short-term cost-effectiveness. Money frequently leaves the local economy prematurely due to installment obligations that deplete salaries before they can be spent at local producers. From a broader perspective, local economies often struggle with exchange rates tied to more affluent regions, which can damage the competitiveness of local businesses. In general, economically weaker countries cannot dominate the creation of money. This is even more difficult for smaller entities like cities, neighborhoods, and social or racial or linguistic minorities.

Politicians often believe they can resolve this situation by stimulating and subsidizing exports, driven by influential lobbies funded by those who stand to profit. In most cases, there is no consideration of consequences on the local availability of purchasing power when evaluating the pros and cons. Focusing on the export of natural resources can even hinder development, as it can lead to increased demand for the currency, creating a Dutch disease situation. However, in some cases, local communities do benefit from the profits generated by exports, as seen in Brazil, where oil-rich communities get a remuneration that they use the proceeds to provide a basic income, thereby increasing local demand significantly. In contrast, many communities suffer pollution from the extraction of natural resources such as in Nigeria, where oil leaks from Shell's operations have devastated the environment. And such a concentrated income can easily result in corruption.

Stimulating exports often involves foreign capital exploiting natural resources and labor while most of the income never enters the local economy, aside from potential bribes. A more intelligent approach than focusing on export of natural resources, would be to focus on the realization of local clusters of SMEs that might create a base for both local consumption as well as exports.

This brings us to the question: What options are available for less productive sectors of the economy that suffer from unfavorable exchange rates? Could having a separate currency for each underperforming region, or group of such regions, within a shared currency zone be a viable solution?

We are concerned that such a currency might not be robust enough to survive in a world where entire countries have been compelled to adopt stronger foreign currencies. However, all hope is not lost. Drawing inspiration from Unterguggenberger's successful invention, we note that he didn't introduce an entirely new currency but rather a sub-currency – vouchers based on the Austrian schilling, governed by specific rules that influenced their

behaviour and their exchange rate. This concept can be replicated by local economies and even countries participating in a shared currency zone.

Today, such sub-currencies could exist as digital accounts within local payment systems. Individuals opening such accounts must agree to the governing rules. This agreement establishes that the funds in the account can only be transferred to other likewise local accounts, effectively turning the money into a sub-currency. These rules do not change the value of the money in these dedicated regional accounts; it remains the national currency but with different stipulations. For instance, if someone wishes to transfer "conditioned" money to an unrestricted account, an exchange rate would be applied, similar to the 5% exchange fee charged by Raiffeisenbank in Wörgl to those exchanging vouchers for schillings. This fee encourages both companies and consumers who receive funds in their local accounts to prefer local spending, altering their choices compared to unconditioned accounts.

It's not difficult to deduce that if only a single business, among many, opens a dedicated account and is the sole entity willing to be paid into that local account, it won't significantly impact local circulation. To truly bolster local production, the majority of local producers, traders, and consumers must have and utilize such dedicated local accounts. Widespread community involvement is crucial for the long-term strengthening of the local economy.

Preston offers a blueprint for achieving this: where the government and anchor institutions collaborate to prioritize local spending, the next step is to pay their suppliers using local accounts, what would increase the impact of the anchors' choices. The substantial volume of local spending, as seen in Preston, would convince most local businesses to open a local account and accept local means of exchange. Subsequently, there would be no alternative but to use this money to pay others with local accounts. While some individuals may prefer not to be paid into a local account, they would still prefer this over receiving no payment at all, which could be the only alternative. If this is communicated clearly to businesses, the introduction of these dedicated accounts and the effort to spend within the local economy would be a collective endeavor to improve the lives of everyone. Businesses would quickly adapt to using local accounts for local exchanges, reserving money on their traditional current accounts for transactions with businesses located elsewhere in the country or the world.

The simultaneous use of two forms of currency is not uncommon. In Uruguay, cash machines offer both pesos and dollars. The government even introduced a third unit of account, an inflation-free unit, specifically for house rental agreements.

It's important to note that the money in local accounts must not be counterfeit but stay national currency, however, subjected to special regulations. Mistakes, such as those in Argentina during the peso crisis following the millennium change, should be prevented. Some provinces in Argentina attempted to use their own currencies for payments, and while regional governments accepted these currencies for local taxes, they suffered far higher inflation rates than the peso itself.

This was one of the sub-currencies that STRO studied, which convinced us of the necessity for local and regional exchange rates. We conducted research on their strengths and weaknesses and started to innovate in technology to create an effective sub-currency for regions, cities, or neighborhoods.

Arguments in favor of a sub-currency

Let us be clear: there are numerous compelling arguments in favor of a strong common currency. We won't delve into these arguments in detail, but we will touch upon how it can provide stability to the currency's value, engender trust in its worth, and offer predictability, which is crucial for conducting business. However, the argument articulated in earlier chapters still holds: in many communities, there is an insufficient money supply to effectively organize the local economy, and the prevailing exchange rate exacerbates the situation.

One potential improvement would be if the money circulating within an underperforming economy could facilitate a greater number of local transactions and remain in the community for an extended period. If the tendency that money is immediately spent on imports could shift towards a use that first focuses on local products and that money would only be spent on imports in a later stage, the local economy and the community as a whole would benefit. As a general principle, it can be argued that to unlock local development, an exchange rate is essential that aligns with the realities of the local economy, enabling increased local production.

In a marketplace, the exchange rate of the national currency is often determined by the stronger segments of the national economy. However, this has as a consequence that money flows away from many regions in favor of metropolises and regions that export the most. Additionally, it creates an uneven playing field for local businesses competing against rivals from elsewhere.

For instance, the Euro may benefit various centers in North West Europe but not the economies where high unemployment rates are the norm, and young people have fewer opportunities.

The differences in economic performance are often reflected in the prioritization these regions receive in the central government's economic policies. This is understandable, as a government cannot afford to jeopardize the economic powerhouses that fund the country or the currency zone. Nevertheless, this practice imposes inappropriate exchange rates on the less prosperous regions, restricting their ability to contribute more significantly to the country's tax revenue and leaving them in a dependent role.

Governments often attempt to compensate poorer areas with subsidies for prioritizing on the needs of better-performing economies. Probably they are hoping that the benefits will trickle down. However, the reality often demonstrates that such money transfers do not invigorate the economic structure of impoverished regions. This results easily in dependency on financial support from the wealthier regions by the less affluent areas. A strong argument to develop a more structural solution focussed on exchange rates per country or region.

Some regions win, and many lose. Overall, society is jeopardized in the long term. The interest for 10-year government bonds in 2015 reflected this situation in the Euro-zone:

Germany: 0.6%
Netherlands: 0.7%
France: 0.8%
Greece: 11%

These rates provide a clear indication of which countries must contend with exchange rates ill-suited to their economic realities.

In hindsight, it could be argued that the southern part of Europe would have greatly benefited from a more advanced implementation of the European Currency Unit (ECU), fostering closer cooperation with greater flexibility. This approach could have better served the regional economies within Greece, Italy, and Spain because it would have allowed them to adjust their currency within the system's framework securely. These currencies could function as sub-currencies, benefiting from the overall cooperation while having the flexibility to adapt to their unique economic conditions. With the advancement of information technology, this concept could be taken a step further, enabling diversification within a single country or currency zone. Such diversification could be implemented at the level of dedicated payment systems, where specific account types are geared toward

trade with other economies, while parallel accounts prioritize regional trade. The government's tax revenue could be channeled into these localized accounts. So, the final argument is that the technology is available and fairly easy to implement.

The impact of Singapore getting its own independent currency

History offers examples of the significance of dealing with an exchange rate that accurately reflects the economic reality. In 1965, Singapore gained independence from Malaysia. The population of Singapore was predominantly of Chinese descent, while the rest of the country consisted of Malay people. This situation created a sense of alienation among the rural Malay population. Additionally, the (rural) Malay areas primarily contributed to foreign currency inflow through exports of raw materials such as tin and rubber, which made them think of Singapore as a burden.

Just two years after gaining independence, Singapore introduced its distinct national currency (Liew and Wilson, 2021). While the Malay areas ended up with a relatively expensive currency reflecting their raw material exports, Singapore's currency was relieved of the Dutch disease, which had previously led to an appreciation of the combined currency. Singapore, lacking agricultural inputs and tin mines, could gradually benefit from its large urban population. This allowed for increased local production for local consumers and an expansion of exports encompassing a wide range of products and services. After gaining independence, Singapore had no alternative but to earn imports through its own exports. This became possible once the city-state had a currency that perfectly aligned with the nature of its economic development. The creation of a currency with an exchange rate mirroring its economic reality, alongside a supportive set of policies, facilitated Singapore in developing a diverse and robust economy (Chow, 2008).

It all starts with the decision for long-term development by buying locally more often

Communities frequently find themselves facing a choice between purchasing cheaper products from distant sources and opting for pricier local alternatives. Do they realize that the choice to buy the cheaper foreign product constitutes a decision against long-term development? Are they aware that they are ensnared in a prisoner's dilemma where selecting the cheapest option in the short term hampers their long-term progress? In Preston, we bear witness to institutions that break open this dilemma by prioritizing the long-term well-being of the community. They believe they have a moral obligation to guide their purchasing policies in this direction. Consequently, their increased focus on local purchases results in numerous local businesses selling more and earning greater revenue than they otherwise would. This, in turn, empowers these businesses to offer better alternatives, potentially to a point where consumers and other companies may also shift their focus (Shuman, 1998).

It is crucial to make it clear from the outset that this buy-local initiative is part of a step-by-step process: the anchor institutions take the first step in serving and prioritizing the long-term interests of the community. Nevertheless, others within the community, particularly the suppliers who receive public funds, must follow this commendable example and strive to spend the money they earn from the anchor institutions locally whenever possible.

Initially, buying local may incur higher costs. However, in the long run, it proves to be a worthwhile investment. The Preston Model was developed with the consideration of social identity theory, where social cohesion is strengthened when individuals take pride in spending locally, ultimately contributing to positive outcomes (Prinos and Manley, 2022). A study conducted by members of the Preston Council in 2012 underscored the significance of community cohesion (Communities Scrutiny Panel, 2012).

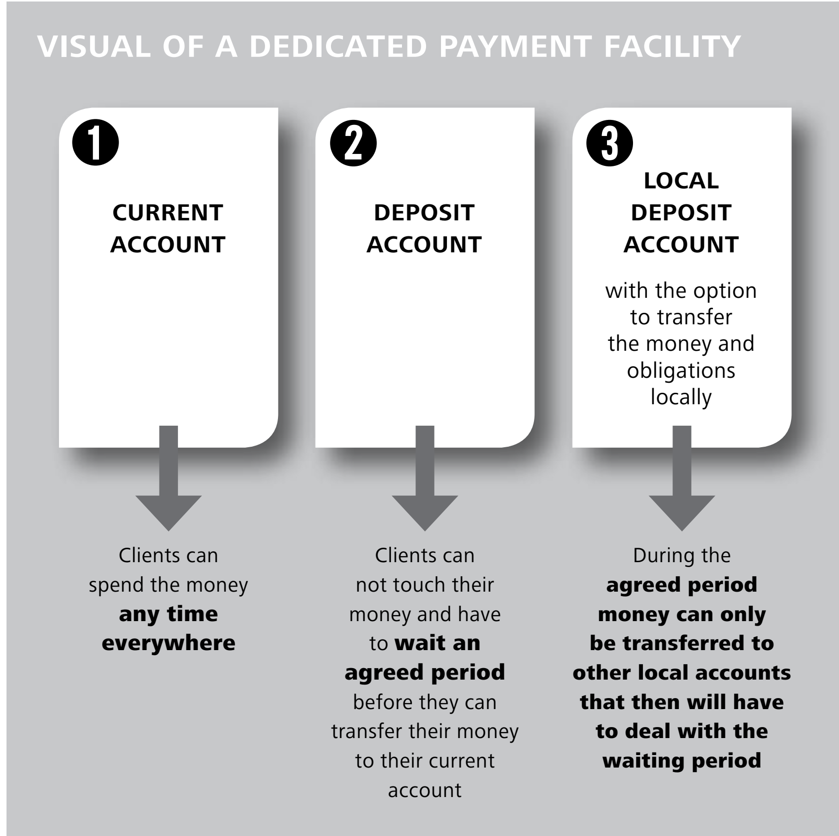

Figure 9.1
A bank can offer various types of accounts, each with its own rules. Money transferred into the local payment environment will get a dedicated ruling during the duration of the agreement such as is the case with money that is deposited. Not on the level of individual accounts, but on the level of all dedicated accounts in that community.

Local money on dedicated accounts, ruled by a local agreement

For the community to reap the benefits, it is imperative that anchor suppliers spend their earnings locally as much as reasonable. The anchors can ensure this by channeling their payments through a network of dedicated local accounts, which restricts their suppliers to spending within the network of conditioned local accounts.

But what exactly do we mean by a local account? In nearly every country, banks offer a variety of account types, each with its unique set of conditions. You are likely familiar with the conditions that apply to well-known account types, such as current accounts, family accounts, deposit accounts, and accounts designed to encourage youth savings. There is no compelling reason why a bank should not include a local current account in their array of offerings. This would be an account that permits transfers only to similar accounts and imposes regulatory limits on transfers to conventional current accounts. The key difference between these local accounts and the Wörgl vouchers lies in the fact that the latter represented claims on money within the Raiffeisenbank, whereas the funds in the local accounts remain in the form of the national currency, just like in any other current account offered by the bank.

Nevertheless, the rules governing these local accounts can mirror those of the Wörgl vouchers: a five percent fee (or another specified percentage) for transfers to conventional current accounts and penalties for funds not spent immediately. The rapid advancement of payment apps has made it significantly easier to digitally recreate the Miracle of Wörgl.

The Central Bank should not encounter any issues with such an account, as the total money supply remains constant:

- **Users can rest assured that the bank fully guarantees the money, as it does with their standard accounts. And the Central Bank guarantees that money as in any current account.**
- **In Wörgl, using vouchers incurred no costs. Similarly, opening a local account and transferring funds from one local account to another can be made free of commissions.**
- **For transfers to other types of accounts, charges may be applied. These need not necessarily match the 5% rate of the Raiffeisenbank. The 5% fee can be set at a value that aligns with the desired behavior of the money within the community.**
- **Another rule that could be implemented for local accounts is an incentive for prompt spending, which can be enforced through an avoidable commission or negative interest charge. In a digital environment, this doesn't need to be a monthly fee, as in the case of the Wörgl stamp costs, but can be calculated and charged per second.**

Certainly, various other rules can be established for modern digital accounts. For example, instead of the city profiting from the income generated by the exchange fee, as in Wörgl, that income can be used to reward everyone who transfers money from a regular account to a local account as compensation for adhering to the restrictions imposed by the account's rules.

Anchors will know when it makes sense to buy local

Buying locally should not be treated as a religion; it should be a choice. One can wonder when it makes sense to make that choice. When is it acceptable that the local offering is more expensive? For public institutions, this acceptability partly depends on the additional cost they have to incur and partly on the positive impact their choice to buy locally will have on the region's economy. For this they should be aware of the long-term wins and losses if they do NOT buy locally. However, wins and losses on social exclusion, the environment, etc., are not easily quantifiable. Next to the purely economic aspect, there are also social and environmental impacts to consider. With all these elements in mind, the institutions must determine how much more expensive local purchasing may be before the balance tips the other way. Buying locally will then sometimes be the logical choice, but on other occasions, it is not.

One of the elements that make the impact difficult to predict is the economy's complexity. The company where the anchors buy makes more sales. The best one can hope for is that this results in cheaper production, and that the next time, the price will come down, and the company can compete on the price. The company also pays salaries, and that money will be spent as well. A whole chain of activities arises, partly of an economic nature and partly reinforcing social cohesion. Choices are made differently with an impact on the environment.

To estimate the impact, it is important to know how much more often the money that the anchors refocus on local spending will next be used in the region. Even if no local accounts are used, as in Preston, we can expect that a local company will spend a much larger part of its income locally than what a company from outside will do. In Chapter 12, you can learn that a local payment environment can increase the local use of money considerably. It shows that other local businesses than the suppliers of the anchors are earning more, thanks to the initial choice of the local government to buy local and use a local payment facility to transfer the money. This might even lead to additional tax revenue for the government. In the case of Preston, local purchasing proved to be the kickstart for a broader positive development. This development is exactly the opposite of what Preston was dealing with before the start of the Buy Local campaign, with a declining economy.

Mitigating the prisoner's dilemma with a premium earned by the exchange rate

A prisoner's dilemma can be solved if the prisoners decide to trust each other and make a deal. In the original setup of the prisoner's dilemma, the prisoners were kept apart to prevent this from happening. However, even if they had the opportunity to meet and agree on a deal, they still could not be sure that the other would stick to that deal. In such cases, an outside authority is needed. For example, a government that forbids a certain behavior with a law or that stimulates behavior with a tax incentive. Authorities could influence consumer preferences by taxing those imported goods that are easy to replace by local production. Countries have followed that policy with various degrees of success.

Consumers could decide to jointly buy from a local supplier if they were convinced that it was wise. However, that would only be possible if social control is strong enough. Consumers will be more easily convinced if the anchors take the lead, and their procurement strategy enables more attractive prices for local production. As we will see, local accounts might offer a premium for incoming money.

To get the public involved, they must understand the positive impact if they succeed in making the money circulate locally more often and for a longer period. Those who make the effort should be sure that the profit will be fairly distributed.

A local payment environment can realize just that. The digital accounts facilitate consumers in an underperforming region or that are part of a social group to ensure that everybody who receives the money will support the positive outcome of the dilemma. This raises the central question: How can one make sure everybody would join the local accounts?

All over the world, groups of businesses or consumers combine their procurement to negotiate better prices. This also might solve the prisoner's dilemma: better for the buyers who pay less and better for the selling businesses because they secure existing and get extra clients. In Brazil, for example, consumers joined the *compras collectivas*, where the collective purchases enabled individuals to get a lower price. This effectively bypasses the prisoner's dilemma.

Of course, the long-term gains are distributed over many different entities: Not only the direct supplier but also the suppliers of these suppliers, job-seekers, youth that don't have to migrate to find work, the government that receives more tax income, and the public benefits. This introduces a question: can these long-term gains be used more directly to motivate individuals, businesses, and anchors to buy locally? In many prisoner's dilemmas,

We mentioned this before, but we cannot stress it enough: Improving the local economy is not against the long-term interest of other cities and regions. As we witnessed in Honduras, it might come at the cost of non-local traditional suppliers of imported goods such as diesel, but in the end, the money earned with exports will ultimately be spent on (other) imports. The oil companies may earn less, but other businesses in foreign countries will sell more. In the case of Honduras, we hoped that the cooperative that organized the production of biofuels would be able to benefit from the replacement of imported fossil fuels by bio-diesel to pay for the import of capital goods to further improve local production. Indeed, the sellers of diesel would earn less, but the producers of these capital goods would get additional sales, and, all in all, production and trade between regions or countries will gradually shift from simple products to more complex products, with wealth increasing in all regions.

the obvious answer is that the government should try to get hold of part of the gains and (at least partly) redistribute these to stimulate the choice of buying local. Support by subsidies, however, is a questionable way to stimulate the economy over a longer term.

The miracle of Wörgl provides a blueprint of how the local government took hold of such gains when it introduced fees paid by those companies that earned the vouchers. People who received the vouchers as payment should spend quickly since waiting before spending the vouchers made them lose one percent monthly. Those who preferred to exchange them for schilling lost the 5% fee the Raiffeisenbank charged.

The higher the exchange rate on local accounts, the more local clients of locally produced goods and services must pay, and for-

ca. 1933: Exchanging voucher money for schillings at the Raiffeisenbank in Wörgl.

eigners will refrain from spending there. If the exchange rate lowers, local entrepreneurs get better chances both in domestic and foreign markets. The same mechanism works for money locked in, ruled by a local payment facility. People and institutions that transfer money into the system of local accounts get rewarded and buy more with their national currency. Local products and services become relatively less expensive and may be cheaper for those who have earned national currency. All transfers from national current accounts into local current accounts would be rewarded with a premium. The income to finance that reward will be earned when that money is transferred from a local account to a national account for purchases outside the community.

In the digital system, the premium would automatically add to any sum transferred from a traditional current account to a local account type, regardless of who is making the transfer. Such a reward would make the local products de facto cheaper for those who hold money on a traditional account and people from elsewhere. This makes buying locally a lot more attractive.

How a special kind of account can introduce a quasi-exchange-rate

For every economy, it is optimal to have an exchange rate that fits their economic conditions, be it a country, a geographic region, or even a racial or linguistic group. Even large and populated neighborhoods in a city with few economic opportunities might improve their fate with such dedicated accounts. This is separate from the question of whether one umbrella currency is more convenient than many different currencies or not. For Greece, it would be and has been advantageous to have a different exchange rate than the one affected by the exports of the Northern European countries.

With an exchange rate within the context of the Euro the benefits of joining the Eurozone would not be lost. It helps stabilize

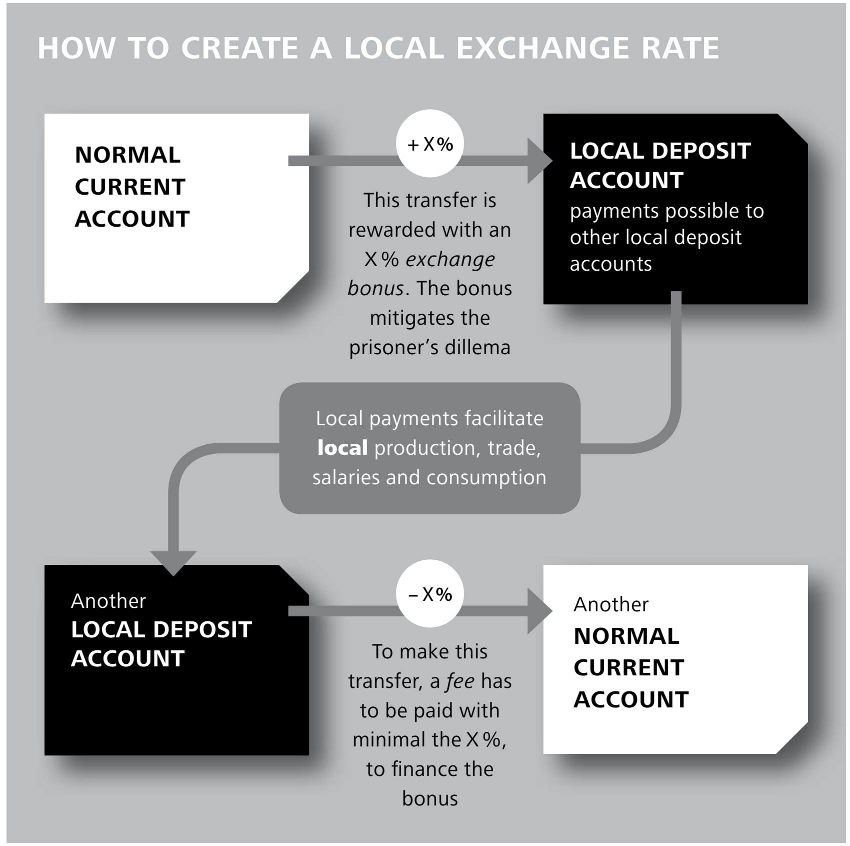

Figure 9.2
To make the local offer less costly, those that transfer their national currency to a local account receive a Bonus. The Bonus makes the local offer more attractive. Spending outside the community, using money from a local account, gets more expensive.

the value of the currency for both countries and traders in a world full of money looking for options due to speculation on changes in the exchange rates.

Since the rapid development of IT, however, there is a good reason to consider if a double win might be possible: stick to the Euro while introducing digital payment platforms that offer account types that set a quasi-exchange rate to stimulate the economy of a specific target group. While the money in such accounts is still national currency, the rules of these dedicated accounts can include premiums and exchange fees. Technology now allows us to review the payment system and remove the non-fitting exchange rates that are a major element blocking development for many communities. It functions like international webshops: customers see the price as it is for their currency and do not have to calculate exchanges themselves. These new options provide us the chance to use the best of both worlds: a quasi-exchange rate fitting for the local economy *and* the stability of being embedded within the framework of the umbrella currency. Just like what happened in Wörgl, but much easier to organize.

The additional use of the money will increase the GDP of the targeted economy and enable an increase specialization, possibly even leading to the offering of new products and services to replace imported products. Some newly developed products introduced successfully locally might later grow into export products. These additional economic activities strengthen economic and social cohesion in the community.

Conclusion

Underperforming economies can utilize digital dedicated local accounts to boost the utilization of available funds, resulting in increased turnover for local companies. Some of the funds may even reach entrepreneurial individuals who can initiate new additional production.

The potential of this approach is immense. Just imagine what it would be like if the most entrepreneurial individuals could develop opportunities at home and were not forced to migrate, and young people could find attractive jobs at home, allowing them to choose to stay closer to their families. The national economy will be positively affected when local accounts help regions, cities, neighborhoods, or groups harness their economic potential more effectively.

In this conclusion, a disclaimer is needed: this method and technology only make sense to the extent that the local economy has unused capacities and has developed to a certain level of diversity in companies. Another condition is that major local spenders transfer their money to local accounts and can convince suppliers to also open a local account and accept payment through such an account. In any economy that is not operating smoothly, one should consider the option of introducing local accounts. These dedicated current accounts make the money on these accounts behave like a different currency with an exchange rate that enables local businesses to get competitive. Next, this fee enables a premium for those who transfer their money into the local circulation, which will stimulate new dynamics and enhance the opportunities for local production for local consumption. Subsequently, such strengthened local production forms a more solid basis for trade with other neighborhoods, regions, or countries. In this way, adjacent municipalities also benefit from the economic improvements of their neighbors.

Given the significant impact of an overpriced currency (inappropriate exchange rate) on the economies of many communities, at the very least, a public debate is in order about the desirability of accounts based on the national currency governed by a set of rules that favor the long-term development of the community. Showcases for each type of community will spread these innovations.

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Chapter 10

Developing the Local Payment Network: Time Counter Technology Replaces Exchange Rates

Introduction

If a geographical, social, or racial community succeeds in boosting the local money multiplier, one can expect growth in the local economy: local production focused on the region will increase, and the increased income from trade and salaries will be available to support additional local production. Success is most achievable in communities with significant unused capacity due to an ill-fitting exchange rate, which is often associated with the "Dutch disease".

To assist these communities, STRO has developed Cyclos payment software, in which options have been programmed to facilitate various types of accounts, each with its own set of rules. This enables Cyclos to serve different target groups and optimize their economic performance. It allows each community to specify internal rules and the rules that guide their relations with others. The technology is robust. One Cyclos user, a commercial bank with over a billion in turnover, holds the record with over 900 different types of accounts for its clients. Transfers between all these types of accounts are possible with dedicated exchange rates directed by the markets.

In our research and development (R&D), we tested many different sets of rules for dedicated accounts. These rules were often focused on increasing domestic production and consumption and providing better conditions for export, but we also explored additional aspects, such as:

- **How do we prevent people from perceiving the money in these local accounts as lacking value?**
- **How can we address this common weakness of many alternative currencies?**
- **How can we make sub-currencies a viable and attractive option?**

One thing became clear from these entire R&D: The two keys to success are:

- **Encouraging most local businesses to open a local account.**
- **Ensuring a substantial flow of money from traditional current accounts into the local payment environment.**

When these two conditions are met, the rules of the accounts can be configured to enhance circulation. Companies using a local account benefit from additional sales, strengthening their motivation to be part of the community using these dedicated accounts.

Exchange fee scares importing businesses

Setting an exchange fee, while simple in technical terms, poses challenges in maintaining trust in the value of money in accounts governed by these rules. Some businesses hearing for the first time about the option of local accounts that lead to extra sales may embrace the idea, hoping to increase their sales. However, businesses that purchase products from suppliers outside the community may resist the idea. They are concerned that they won't be able to spend the income earned because suppliers from elsewhere cannot open a local account. Consequently, they may end

up with money stuck in their local accounts, needing to transfer it to a non-local account and pay the exchange fee, similar to the 5% fee charged by Raiffeisenbank. These companies may also be reluctant to accept local payments, or if they do, they may raise their prices for payment from a local account. They may seek upfront compensation for *all* their local income, not considering that they likely do spend a lot of money onside the community that can be paid with local money.

This actually happened in a project STRO was involved in. Some clients of these companies began to copy this behavior and added a percentage to their invoices for clients who wished to pay them with their local accounts. This effectively hindered the establishment of an exchange rate and its positive effects. This was unfortunate because these concerns were largely unfounded.

The challenge was how to address this situation. Not charging the exchange fee would mean that the money would rapidly leave the local circulation and would not generate enough income to offer a premium to bring money into the local network, which is essential for solving the prisoner's dilemma. This led to the question of how importing companies could be encouraged to participate in the local circulation without blocking local development. This challenge prompted us to develop an alternative to finance the premium and enable importing companies to join the local circulation.

Interestingly, the solution we found was developed to address a different situation. In the CompRaS network in the state of Rio Grande do Sul in Brazil, companies that wanted to transfer local money to the national currency, the real (plural reais), had to pay exchange fees, similar to the those in Wörgl. The fee was set one percent higher and 6% was charged. Surprisingly, these Brazilian companies had relatively few problems accepting earnings on their local account, even though it cost them 6% to exchange it. This was possibly because most of them had enough spare capacity to deliver a marginal profit far above 6%, making additional customers highly valuable to them.

However, CompRaS faced an unexpected problem. This 6% fee hardly incentivized companies to spend their local earnings within the network. In reality, they exchanged the local money immediately for reais, accepting the 6% costs/loss. This undermined the goal of increasing the local circulation.

In one case, we discovered that a company that had always exchanged its local money for reais as soon as it was earned had one of its suppliers also participating in the network, accepting payment through CompRaS. We tried to understand why the first company exchanged local money with a loss, instead of spending it at that supplier. Why did it accept a loss of 6%? We contacted the supplier to find out if they had refused to accept local money. The supplier denied this and informed us that the customer had never offered to pay through the CompRaS network. We were surprised by this revelation: that company could have effortlessly paid with CompRaS money and saved the 6% exchange fee. We were curious why they had not done so, instead of accepting a loss of 6%.

Through repeated inquiries, we discovered that this company was used to having customers pay with credit cards and was unfamiliar with the concept of a "debit card". (CompRaS used a plastic card to transfer the local money, which was, in fact, a debit card). However, to the company, all plastic cards were perceived as credit cards. As a result of this misunderstanding, they treated the earnings from the CompRaS card similarly to the income from the credit cards they accepted, despite the different conditions. Hence, the six percent exchange fee in CompRaS was seen in much the same way as the five or six percent fee charged by all credit card companies. Several other participating retailers made the same assumption. They were so accustomed to the credit card routine that they couldn't grasp that this debit card worked differently. Obviously, the six percent costs were too low to stand out significantly, making them unlikely to take notice.

This situation raised the question of how to change the rules in CompRaS so that these companies could be motivated to pay their suppliers with a local account. Moreover, how could members invite their suppliers to also become members and accept such payments? One idea was to raise the exchange fee, say, up to 10%, to make participants think twice about cashing out. However, research indicated that this would create more problems with the "importing" companies. They would likely resist joining a network with such high exchange costs. This resistance mirrored what we encountered in a Dutch project, where importing businesses were reluctant to join and even actively opposed the idea. They were not inclined to check how much they could spend on local suppliers they already paid for services like the local garage, accountant, building rental, etc. This negative attitude was primarily based on perception, and it didn't align with the reality since many companies we met focused on their main expenses (the payments for the imports) as if it was an all-or-nothing choice. They perceived the restrictions as hostile and believed that the promotion of buying locally was against them.

> If "importing" companies leave or do not join a network, there is a serious risk that this sends a signal to their customers. If these suppliers do not accept payments in the local system, their clients would fear that they might get stuck with the local money and have to pay the exchange fee (even while they have many other expenditures.)

Importing companies underestimate how much they spend locally

Before moving on to the solution we developed for both problems mentioned above, we once again want to make it clear that reality offers many more options for importing companies than what is commonly felt. In the first years after the introduction of local accounts, most businesses only earn a limited part of their overall revenue in local money. Almost every business can spend that level of income locally easily. Over time, when the income in local money grows, the options to spend locally would also have augmented.

The introduction of an exchange rate aims to encourage the replacement of some existing imports with locally produced goods. While the total volume of money available for imports remains the same, there will be a shift in the composition of imports. Specialised importing businesses will need to adapt their product portfolio to align with this change.

Sardex…

There was a local importer of computers on the island of Sardinia who had doubts about joining the Sardex network because he was unsure where he could spend the local income. Ultimately, it was not the many options for spending locally that made him change his mind. It was when he learned that he could use his Sardex units to purchase local real estate. That provided him with the option to save for his old age with a portion of his income earned from his Sardex sales.

However, as the saying goes, to paraphrase Machiavelli, "Innovations are opposed by the parties who stand to lose, while the parties who stand to gain do not yet see their importance, or do not exist yet." This highlights the challenge of driving innovative changes, where those who could benefit from the innovations may not fully understand their potential, or worse, they may not even exist at the time the changes are proposed. This is the reality that we must creatively adress when introducing new economic strategies and systems.

…and WIR

An option similar to that in Sardex proved important in the Swiss WIR system, where an accountant received 100% of his income in WIR. We wondered how such a thing would be possible. Where did that company get the francs to pay the tax office? The government did not accept payments in WIR. We discovered the accountant spent his WIR earnings on the construction of houses. These houses were sold for Swiss francs, providing the accountant with the francs necessary to pay taxes and buy things outside the WIR network.

The time-counter-innovation replaces the exchange fee

STRO's R&D program invested time in finding a solution for the problems described. We focused on making money circulate locally without an exchange fee. To ensure that such money would circulate enough in the local economy, we worked on the introduction of a rule that would make money stay within the local accounts for a minimum period. Implementing a rule for the money to remain local for a fixed period would potentially replace the exchange fee without compromising the option to boost the local economy. Initially, we concluded that this rule centered around the aspect of time was a great concept, but at first, we could not make it feasible: money that entered a local account would hardly ever be spent as one sum to another. In reality, it would end up in small parts spread across various accounts.

This flexibility is an important feature of an effective means of exchange. We needed technology to track how long ago all the different parts of the money in a specific account had been within the local network. This would identify the money that had circulated locally long enough to be allowed to be used for payments to national accounts.

Finally, we succeeded in developing the algorithms for the software that enables a time counter to keep track of the "age" of money in every account, even when it was passed on in parts to various accounts. The tracker we developed functions as an hourglass. It starts counting the moment money is transferred from a traditional current account into a local account. When the hourglass is empty, that money can be transferred to traditional current accounts without additional costs. This way, the time counter indicates which money has circulated long enough in the local accounts, serving the community. It calculates for every account when the money on that account can be relieved from the rules and receive the green light to be transferred to traditional accounts. The tracker can handle accounts that contain money originating from different sources and moments of introduction into the local circuit. Thanks to the tracker, it is no longer necessary to have an exchange fee to guarantee the local availability of the money.

The rules of local accounts with a time counter are similar to those of traditional deposit accounts: when someone transfers money to a deposit account, that money cannot be touched for a predefined period. The rights and obligations of money in a regular deposit account cannot be transferred by the owner because the bank uses the money during the deposit. With a time counter, the money is not used by the bank but by the collective of local accounts. All accounts together act like one big deposit account since all the accumulated money stays in the bank. However, the local accounts can transfer the money to other local accounts. Within that cluster, everyone has agreed on the time limitation attached to the money in all the accounts.

This might be easier to understand if you no longer think about money but as claims on money in a safe. The key will only be liberated at some future point in time, and only then can they be cashed. Payments between local accounts do not change the volume of money in the safe, only the titles of who is allowed to cash when the time is due. The time-tracker technology keeps track, for every local account, of the moment the money on that account has to wait until it is liberated from the rules. The software can work with averages or with more detailed information. The average changes every time additional money (with a different "age") enters the account. That new mix of money from different sources creates a new moment when the money can be transferred to traditional current accounts. The money in the local accounts stimulates local economic activities up until the moment the period has passed, the hourglass is empty, and the time lock on the safe opens, enabling transfers to non-local accounts.

The time tracker explained

We compared local money ruled by a time tracker with money on a traditional deposit account. The money in such a deposit account is not a different currency. However, the rules of the deposit account make it impossible to spend the money during the agreed deposit period. During that time, the bank can use the money, which is not the case with money in normal current accounts. The rules are agreed upon when opening such a deposit account: Because the owner agrees not to touch the money for a certain period, a higher interest remuneration is offered. The ruling might offer an opt-out that arranges for the money to leave the deposit account, with the owner paying a fee.

The idea of committing money for a period can be extended to a local current account, but with one exception: the option to transfer (spend) the money to another similar account. This commitment allowing the use of the deposit is made to the community instead of the bank. If the money is transferred to another local account, the new owner inherits the waiting time before that money is liberated from the deposit and can leave the community without paying a fee. As long as the period of the deposit, the money can be freely transferred between these local accounts because account owners take over the deposit obligation of each other. This results in two options for the owner of money in such an account: either use the money locally or wait (or, if allowed, pay the exchange fee to enable a transfer to a non-local current account before the hourglass is empty). These rules influence the behavior of money and, in some ways, set that money apart from the rest of the money. Depending on the agreed rules, the money might behave as a "sub-currency".

Combined with a circulation fee, the time tracker finances a premium

Once we established a way to ensure that money would circulate in the community for a fixed period, a new option emerges to fund the reward for transferring money from a national current account to a local account. Unlike the situation in Wörgl, where the income from the stamps depended on the choices people made to exchange or not, the introduction of the time tracker provides a stable income to finance a premium to be given as a reward for bringing money into the local circulation.

From a high-level perspective, the total sum of the money is always in someone's account, meaning that there is always someone paying for the digital stamps/negative interest fee during the period that is chosen for that community. This guarantees a secure payout on accounts where such a time tracker ensures that the money will stay inside the network of local accounts for a fixed period.

Charging for not spending the money earned has three positive effects:

1. The combination of the time-counter and the digital version of the stamps generates a predictable income. That makes it possible to use that money to finance the reward for the money that enters the community of accounts with as a premium. Effectively, this is the part of the exchange rate that makes local companies more affordable for people with income in (inter)national currency. The premium compensates governments, anchors, businesses, and consumers might buy locally a little more expensive. The premium helps local suppliers to make a more competitive offer to local consumers.
2. The charge also stimulates economic activities by increasing the velocity of money and the number of times the money is used by community members.
3. Preferrably not all the income from the commission that is charged on money in circulation, is used for the premium. That would allow several other interesting options:
   - Use part of the income to finance system costs;
   - Use part of the income to invest in the local economy.

The advantageous aspect of collecting money through a fee on earnings (not yet spent) is that the burden falls on the businesses that make earnings thanks to the local circuit. The fee's level, along with the duration the counter enforces for the money to stay local, stimulates an increase in local earnings.

In conclusion, the combination of the time counter and avoidable commission provides regions with the option to establish a network of local accounts that functions as a sub-currency. With this tool, these regions can (partly) address the prisoner's dilemma, which drives people to buy everything outside the community and offers no opportunities for the development of local enterprises.

Figure 10.1
On your mobile-app one can see the remaining turnover time. In this picture, you can see two statements for Bob's account during five consecutive days. Please notice that the time Bob can transfer his money to a non-local account has decreased by 5 day.

What does a time counter look like?

When money is transferred to another local account, the remaining number of days becomes associated with the money transferred. In the receiving account, the money becomes commingled with the funds already present before the transfer, resulting in a new set of remaining days for the new, combined amount. When these two sources are mixed in the receiver's account, the total amount of money is attributed to a new weighted average number of days. For example: if there is $100 in an account with a remaining term of 5 months and an additional $100 is received on that account with a remaining term of 1 month, the new term for the combined total of $200 will be the average of $(5+1)/2 = 3$ months.

Once the countdown in someone's account reaches zero days, the balance can be freely transferred to any (non-local) current account. However, until that point, the money remains obligated to circulate among local accounts. The software also offers additional options that allow users with accounts that receive daily deposits to transfer the older part of the money in their local account to a traditional current account.

Managing the time counter strategy: how long and what conditions are best?

During the parametrization of the Cyclos software, the community, or the organizers of the local accounts will need to select the time period for the time counter. For instance, if it is intended to circulate in the region for six months, a six-month counter is attached to all incoming funds. Likewise, the commission percentage needs to be selected. These two factors together dictate the commission income and, consequently, the option to reward money that enters local circulation.

In initial networks, a lengthy period and a high commission percentage can make joining the network less appealing, and

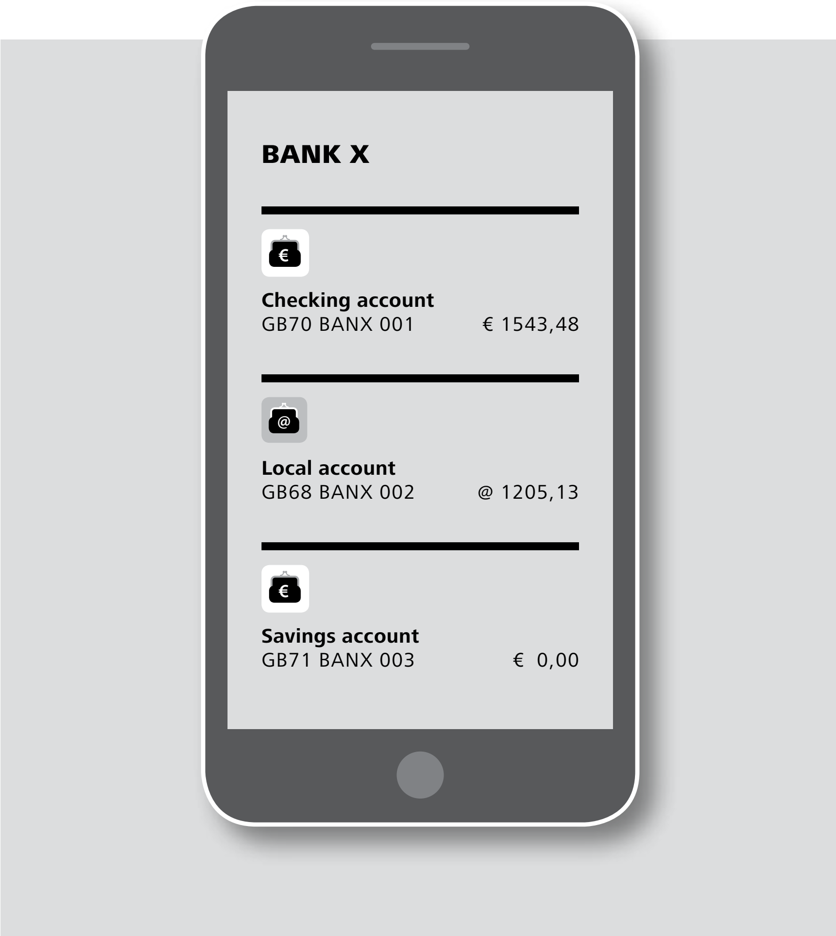

Figure 10.2
Normal deposit / transferable
deposit accounts with time counter

suppliers may be reluctant to accept payments in their local account. However, if the money spent by anchoring participants is a significant portion of potential earnings, suppliers may have limited alternatives.

Let's compare two scenarios in a network with only five businesses as members to gain some insight into the choices. With five companies, spending options are limited. In one case, the time counter is set for one year, and the commission is set at 1% per month. In the second scenario, the counter is set at four months, and the commission is set at 0.5%. How would suppliers react if the anchors encouraged them to accept payments in a local account? With spending options so limited and a one-year period, suppliers will expect that a significant portion of the money will not be spent during that year, while they face a potential 12% cost. This is not an attractive prospect. If they have no choice, one can be certain that the supplier will make every effort to attract more businesses to join to enable spending the money. However, they will be hesitant, fearing they will have to wait for months to come and pay the fee on not spending. In one of STRO's projects this was countered by using part of the income to compensate strategic companies.

When the period is set at four months and the commission at 0.5% per month is quite different. These conditions minimize the potential loss to 2%, which makes it more attractive to earn the money but also provides less incentive to involve additional suppliers. Simultaneously, it will be easier to convince new companies to join. Creating a strategy that is in line with the local situation is difficult. Read more about this in the upcoming chapter.

Local accounts with a time counter increase resilience

The time counter not only secures a fixed income from the avoidable commission but also ensures that the money circulates rapidly during the length of the deposit. The impact on the local multiplier is affected (the number of times earned and spent). This helps to generate additional demand from local producers while preventing the money from lying idle during that period. In other words, the combination of the time counter and the avoidable commission helps to increase the flow of money through the local economy and boost local transactions.

The time counter enables local accounts to function as a kind of sub-currency. The cost of the exchange fee is absent, but the premium makes buying locally cheaper, resolving one of the prisoner's dilemmas. The entire local economy receives a boost until most of the local capabilities are utilized. Once the economy seriously improves, the time on the counter should be set shorter, reducing the commission and the premium. If the economy reaches its optimum, both commission and premium should be zero. In that case, the local accounts still exist, but they function as normal accounts since the avoidable commission and the time tracker are set to zero. Money in these local accounts will flow exactly like the money in the national accounts. The significant difference lies in the resilience it offers to defend the local economy when the global economy stagnates. Then the rules can be adapted to the situation, allowing these communities to activate their economies and prevent to be drawn into overall misery. The option to better deal with international conjunctural changes is a compelling reason for well-performing economies to establish a network of local accounts.

For every community that is doing fine, it is a wise precaution to prepare local accounts to be ready in case the international financial system becomes unstable or a pandemic occurs.

Flexibility in applying rules to the dedicated accounts

If accounts from different communities are joining one (fragmented) database, Cyclos software can be used to vary the rules for each of the local networks and specify rules for transfers from the account of one community to another. There is also the choice to keep these local currencies separate, even while they are administered within one database. The communities can choose if transfers from their group of accounts to another will be possible. Additionally, an exchange fee can be set on these transfers if trade between the communities is not balanced, in order to prevent one of the communities from losing the means to organize its economy. In the Netherlands, we work with such a multi-community database, and Cyclos allows us if needed to set conditions for transfers from one community to another. The option to have sub-groups within one sub-currency enables spending in all associated communities, while internal exchange rates help optimize all the local economies. This opportunity is important for large cities, where the differences in wealth between neighborhoods are significant, and purchasing power flows away from the weaker neighborhoods long before the potential of the poorer neighborhoods is well-organized. With the introduction of a subgroup per neighborhood with its own set of accounts, the weaker neighborhoods can protect their economic activities from leakages. Conditions can be set to optimize trade between those neighborhoods while equipping the entire local network with a time counter that takes care of the relationship with the traditional non-local current accounts.

Conclusion: It is smart to boost the impact of buying local with a digital local payment network

The time counter can facilitate communities in increasing the circulation of available money. It provides an instrument for governments, donors, and migrants who want to make their expenditures have a more significant impact on the economy of a targeted community.

To apply the instrument, an environment of dedicated local accounts is needed. The time counter can then help gain the advantages of a dedicated exchange fee while diminishing the negative aspects, such as burdening companies that earn their money through imports. It helps attract money into local circulation, contributing to the growth of local companies' sales. Companies profiting from the network by making sales will boost the local economy, and importing companies will no longer be the sole bearers of the costs that helps to increase the turnover of others.

In summary, this Fintech innovation allows us to combine the Community Wealth Building approach of Preston with a digital version of the Miracle of Wörgl, providing an effective and relatively easy way to stimulate the local economy. Modern options for digital payment make the technical and organizational aspects of a network of local accounts relatively simple. Of course, it remains crucial for success that a substantial volume of money is transferred into the local accounts, giving local businesses every reason to join and open a local account. Sufficient earning opportunities and spending possibilities in the local payment network go hand in hand. A broad community involvement is and will remain crucial.

Companies with spare capacities have a strong interest in additional sales and are more likely to join the local payment network, even if it has limited spending opportunities and charges costs for not spending one's money. While a set of local accounts governed by a time tracker is likely to be used by communities with under-

performing economies, better-performing communities would be wise to prepare for worse times and increase their resilience. During prosperous years, they have the means to build a structure of dedicated accounts featuring tools like the time tracker, avoidable commission, and the option to balance trade, all ready for when needed.

The law of Gresham: when money on local accounts has different conditions

If there are significant economic differences within one region or city, a payment system with various subgroups of local accounts would be advisable to prevent further polarization, where one group needs to continue donating to the other while the latter is prevented from using its capabilities and losing its dignity. Improving opportunities and removing barriers to self-development is a lot more effective. Disparities between urban and rural areas or between high-end and disadvantaged neighborhoods can be addressed through the introduction of subgroups within the network of local accounts.

"What do we know about the behavior of people in a country or region where two types of money circulate? We know that the question of which money to use first is greatly affected by the development of the relative value of two types of money: If you have in your left-hand pocket a type of money with a value that *diminishes* (or for which you have to pay a commission if you do not spend it), and in the right-hand pocket money that has a *stable value*, what money will you use to pay with? We have little doubt that that will be the money in your left pocket. People will prioritize paying with money that is losing value".

In 1858, this was formulated as "Gresham's Law": bad money drives out good money (good and bad not as a moral verdict, or the impact on society, but connected to the stability of the value of the money).

It's all very well for Gresham to formulate this law, but in Argentina, just before the Peso crisis, we noticed that during hyper-inflation the opposite happened: companies refused to accept the currency with hyper-inflation because the value of those earnings decreased so rapidly that the moment they spent the money the next day the value could have halved. Therefore, they often only accepted payments with dollars from their customers, a currency that did not depreciate so quickly.

The conclusion might be that the level of the commission affects the preference to pay through local accounts but might also block the acceptance of local payments. If the commission is set correctly, it will not be a barrier for businesses to join the local accounts and will optimize the speed of circulation as well. Please keep in mind that this option is limited to the situation where local companies suffer spare capacity. In an economy where most of all potential is being used, the commission should be very close to zero. In Wörgl, we saw that the mayor successfully introduced voucher money with a 1% stamp duty.

"Most local economies in sub-Saharan Africa are cash-starved, yet money enters but leaves quickly without impact, to be spent elsewhere in more vibrant markets e.g. in cities. I am delighted to endorse this book, which discusses options for enhancing the impact of local money which is earned from the provision of goods and services to the local governments and local institutions. I find the book to be not only brave and informative but also very relevant to rural Kenya and other rural African economies."

Mercy Wanjiku Kamau

Senior Research Fellow at Tegemeo Institute of Agricultural Policy and Development, Egerton University

"In this book, STRO explains clearly and practically what is possible at the municipal level, especially in these economically uncertain times. The covid crisis hit a global economy already burdened with unprecedented debt. Euro countries are facing turbulent times. All the more reason to strike local anchors. The Amazonization of the economy is sucking life out of the high street. All the more reason to seize the opportunities that own local money offers to keep work and prosperity in the neighborhood."

Rens van Tilburg

Leading Dutch Economist and Director of the Sustainable Finance Lab at Utrecht University

"This book offers a wonderful overview of the drivers and practical possibilities of strengthening inter-company, citizen and government economic relationships by using payments through local accounts. Based on a multitude of experiences in Europe and Latin America, it explains how a network of short and local chains within a circular economy can contribute to strengthening sustainability, fairer distribution of wealth and greater resilience. As a (development) economist, it particularly appeals to me that this analysis invokes basic economic principles such as the connections between sectors ('linkages') and the acceleration of transited processes ('multipliers')."

Ruerd Ruben

(Emeritus) Professor Impact Analysis of Food Systems
Wageningen University & Research

Chapter 11

The Social Trade Booster

Introduction

This chapter describes aspects of the implementation of the Social Trade Booster, combining lessons learned in England, Austria, Brazil, Central America, Spain and the Netherlands, with the chapters that focus on the issue of why there is too little money and why the money available does not effectively organize the local economy. We will also touch on the ideas of several famous economists.

Key elements that differentiate the Social Trade Booster from local currency initiatives include:

- **The money circulating in the digital local accounts is the national currency but with different account rules.**
- **One major rule is that this money can only leave the community of local accounts once the time-tracker allows it.**
- **Because of this, it is possible to apply a commission fee (demurrage/negative interest rate) that increases the circulation of that money, collects funding to realize a soft exchange rate, finances the organization, and boosts community investments.**

This chapter begins with a description of the various elements of the Booster:

- **A campaign aimed at motivating local institutions to purchase more frequently from local sources and to understand when it is justifiable to accept slightly higher costs.**
- **An assessment of the interest of neighboring communities in joining the initiative.**

- **Efforts to engage local businesses and the broader population.**
- **Last but not least, efforts to involve the staff of the anchors that is responsible for procurement.**

Following this, we delve into the tools that can be utilized, local accounts, and associated rules, including the avoidable commission/negative interest, an exchange fee, and a time tracker.

From there we might estimate of the potential impact. This may be a fusion of the Miracle of Wörgl along with the outstanding results achieved through Community Wealth Building in Preston. Nevertheless, it is evident that much depends on the local context, the level of support for these solutions, and the resistance encountered.

The Social Trade Booster, especially when combined with a Community Wealth Building program, primarily makes sense for underperforming cities and regions. However, even cities and regions that are better off should consider applying these tools: To increase their resilience, it is impossible to predict what the future holds, and the costs of preparing for worse times can be more easily financed if the economy is doing well; to increase community investments, and to work towards a more circular economy.

Evidence that local conditions are crucial is found in the local payment system in Santa Coloma, which is the subject of the next chapter. The success of that payment system was only made possible due to the dedicated political leadership, committed civil servants, and the involvement of two specialists. This commitment allowed for three years of preparation and a gradual increase in the volume of money channeled through the local payment facility. The conditions of voluntary participation, the

bonus structure, and the fee for those desiring non-local currency before the 45-day waiting period set by Santa Coloma, all proved to be valuable in garnering broad commitment. One setback is that the volume will remain limited, and the realization of Social Trade Interest-Free Credit may not be feasible, but that is for the next book to discuss.

If your community is considering initiating a Social Trade Circuit, please carefully read this chapter with a keen focus on the specifics of the local situation and assess the factors that influence the outcome of an intervention involving a local sub-currency:

- **The community's turnover and the percentage that residents intend to spend within the local network.**
- **The diversity of business types within the community.**
  A greater spread increases the chance that the money can continue circulating.
- **The percentage of locally circulating money on normal current accounts that is used for local transactions.**
- **The extent of underperformance or underutilized potential.**
- **The entrepreneurial attitude prevalent among the population and whether there will be (proto-) entrepreneurs ready to seize the extra opportunities.**
- **The expected level of community involvement.**

Before we start: it is wise to know from where you start

To evaluate the impact of the Booster, you need to have a baseline check on how the money in the community behaved before the Booster was introduced. To that end, one needs to know how many times the local expenditures of the anchors circulate within the community before the dedicated accounts are introduced. Such baseline research provides an idea of how urgent it is to increase local circulation.

Once the program is running, one uses these data to check whether the circulation of money has improved. The Local Multiplier (LM3) method provides a tool for this type of research. The instrument was created by the New Economic Foundation (NEF). Over time, the LM3 survey can be repeated to check on progress.[1]

LM3

If we focus on the local economy, the speed of circulation becomes significant only during the period when money circulates within that region. This concept is quantified as the local multiplier. The so-called LM3 represents the percentage of money that remains spent within the region after it has been used three more times. STRO and its partners utilized this tool in the Gota Verde project in Honduras and in the local payment system in Santa Coloma de Gramenet (near Barcelona) to assess the impact of improvements. Please refer to the Santa Coloma report in the next chapter.

The LM3's importance extends beyond underperforming regions. Even regions with higher prosperity may be interested in assessing the resilience of their wealth creation, which a stronger LM3 can indicate. This resilience helps mitigate the risks of future underperformance in the event of international economic downturns or other disasters.

Copy the buy-local-campaign of Preston

The obvious start is to copy Preston and organize a buy-local campaign. That starts with the local Government, institutions, and larger businesses underwriting a social responsibility charter to make a collective effort to get a better future for the community by buying locally as much as possible and reasonably. The involvement of the community at large is important, starting with the small businesses. The results of the Community Wealth Building in Preston show what opportunities arise if the Buy-Local program is embedded in a broader range of improvements such as fair wages, the (local) ownership of businesses, organizing cooperatives, insourcing and municipal investments. Preston also investigated the legal aspect.[2]

Check when buying local is a good alternative

Initially, buying locally can be costlier than purchasing from other sources. Therefore, institutions with a focus on the public interest must determine the extent to which the additional expenses of buying locally are acceptable.

How can they arrive at such a decision? How can they compare present-day additional costs with the potential future viability of the economy? At a minimum, the community requires a vision for its future economy. Which specializations should be made available locally, and what additional economic activities are to be targeted? How can the local production of services be maintained or restored? How can the production for local consumption, such as increased local construction, security, a favorable living environment, healthy food, education, and local services be targeted? When spending money, individuals should make an effort to assess the impact of choosing to buy locally or not. With this vision in mind and an anticipated projection of how money will circulate, one can estimate the long-term positive impact on the community and ascertain if it justifies the short-term additional costs. Up to what price difference would this still hold true?

Apart from what the anchor institution's budget can handle, it is challenging to determine how much more expensive it might

1 https://www.lm3online.com/about

2 The legal topics of local procurement are dealt with within the EU URBACT network: https://www.preston.gov.uk/media/820/Creating-a-good-local-economy-through-procurement-procure-network-partners-and-URBACT/pdf/pages-de-procure-state-of-the-art.pdf?m=1675684342773

be to opt for local purchases. In Preston, buying locally had a positive impact, leading to the creation of new dynamics, such as an improved local economy. Perhaps, as sales of local companies increase, they might be able to enhance their offerings or lower their prices. Buying locally could even lead to a situation where local companies can make more competitive offers in the future, rendering local options more affordable than external ones. This point is more easily attainable when potential local buyers coordinate their purchases collectively. In other words, the logical approach would be to make collective purchases and assess whether this enhances the competitiveness of the local market.

Moreover, there's another cascading effect: the probability that a local company will spend the money it has earned locally is higher compared to a company from elsewhere. Consequently, other firms in the region can profit from the choices of anchor institutions. These companies too will experience increased earnings if anchor institutions prioritize local purchases more frequently. In the supplier selection process, the selected suppliers should be encouraged to collaborate with respect to this ripple effect and make their purchases within the community whenever possible.

Various steps

The first step is to motivate local anchors, businesses, and the public to come to an agreement about uniting forces in order to enhance living conditions and increase community income by raising the proportion of their local expenditures. Just as in Preston, one will discover that there is no objective reason why many of the purchases are done outside the community.

Larger companies within the community interested in behaving responsibly in a social context may be inclined to commit and join the group of anchors at an early stage. It also makes sense to explore other monetary inflows entering the community, such as

subsidies and cash transfers and see if these can be redirected to local accounts.

Don't forget to engage neighboring regions or cities at an early stage and invite them to collaborate in an effort to introduce local accounts. Such collaboration should be built on an understanding that mutual trade can be advantageous for each community if it respects the trade balance between the communities. This collaboration would reduce implementation costs and facilitate more opportunities for spending locally. In the event of an imbalanced trade, Cyclos offers the option to establish inter-local exchange rates to prevent leakages in the local circulation which disadvantaged regions might suffer due to the collaboration. The additional spending opportunities and cost reduction it brings forth are compelling reasons.

Make the buying local effort attractive for the procurement officers

Be mindful that the staff responsible for the procurement of the anchors may exhibit reluctance when it comes to discovering and placing trust in new suppliers. Procurement officers, indeed, may at times be hesitant in enacting the policy of increasing local purchases. The introduction of a new supplier poses a risk to them: If something were to go awry with the new supplier, it's possible that the officer would be held responsible. This differs from a scenario where issues arise with an existing supplier. In that instance, the officer cannot be held accountable because there had been no prior problems.

In Preston, this potential obstacle was resolved through the regular organization of meetings involving procurement officers from various institutions and governments. In these meetings, the officers encouraged each other, shared information, and even made collective decisions. This collaborative effort towards a common objective heightened enthusiasm and reduced the vulnerability of individual procurers.

Manage expectations

The anchors should inform their local suppliers of their expectation that these supplers also adhere to the "buy local" policy. Initially, this may raise issues of trust, but it is prudent to announce from the outset that a local payment facility is being prepared as the next step to further enhance the impact on the local economy and ensure suppliers adhere to the commitment to buy locally too. It's important to explain that it is in the best interest of all if a wide range of local companies benefit from the anchors' choice to buy locally. Over a series of transactions, the money might even return as demand to the first-line supplier.

People often tend to think in a one-dimensional manner. For example, a bricklayer might believe he needs a brick supplier to spend the local money he earns and may easily overlook the fact that he might have a car to repair, an accountant to pay, and a salary that can be used for local purchases. While initial local companies often provide the same product or service, it is also possible that the types of items procured may change. For instance, the annual air travel of staff members to a distant location could be replaced by having a dinner in their city every quarter, attended by all the staff and their families.

Realizing a network of local accounts as a tool to increase the impact of buying local

If we grasp the advantages of buying locally and understand how to implement a Buy-Local campaign, we can then concentrate on the tools for enhancing the impact of local purchases: To amplify the benefits of buying locally and disseminate the idea that dedicated bank accounts are vital to better serve the community. These accounts offer the option to introduce various rules that can facilitate Social Trade. There are compelling arguments for establishing a network of local current accounts with dedicated regulations.

To start, by using local accounts for payments to their suppliers, anchors ensure that their suppliers will be obliged to spend that money locally as well. Depending on the account regulations, the money might even catalyze a chain of local economic activities.

Another argument is that the regulations can establish a more appropriate exchange rate. The 5% exchange fee charged by Raiffeisenbank in Wörgl created a local exchange rate. These 5% costs heightened the preference for local purchases. Simultaneously, the revenue generated from this exchange fee provided the town of Wörgl with funds that were invested in public works. We assume that citizens supported this approach because it felt like a collective effort to combat the devastating impact of the Great Depression.

While in Wörgl the exchange fee financed the town, in the anchor approach, such a premium could be offered to the anchors. They would even receive the premium upfront when transferring their money from a traditional current account to a local one. Potentially, the cost of transferring money back from the local to the national account could boost the motivation of local suppliers to spend the money locally received as payment from the anchors. Next, motivating the suppliers of the supplier also will be more motivated to spend locally.

Initially, suppliers of the anchors might face challenges in spending the income they receive in their local accounts, especially when only a few local companies have opened accounts. During this period, it would make sense for the anchor to forward the premium it received to their suppliers as a top-up when making payments to them. This would give these suppliers the means to convince their suppliers to join.

Over time, as more local businesses open local accounts, this support would become unnecessary, and the anchors could add the premium to their budget or initiate a community fund with it. In all cases where the premium exceeds the price difference between local and foreign products, it would make sense for local companies and consumers to convert their money into a local account, receive the premium, and buy locally. This resolves the prisoner's dilemma discussed in earlier chapters. Of course, this may not always be the case since the premium is not tied to a specific product. How to pre-finance that premium is discussed further in this chapter.

The simplest way to establish a proper network of local accounts is if these accounts would be supplied by a bank. That would ensure that these accounts have the same level of security as all other accounts offered by that bank.

With a limited number of local banks, it may be challenging to find and persuade a bank to participate in the community effort and indeed offer local accounts, even if they are similar in many aspects to the standard digital current account of the bank.

To avoid complex – and expensive – IT integration, the bank can host a separate Cyclos instance as a stand-alone service, with a script that allows communication only with the user database of the bank, and not with the accounts.

If no bank is available or interested in offering such accounts, a community-owned cooperative can provide these accounts, depending on what is allowed within national legislation. In both cases, Cyclos software is recommended because it is specifically designed to provide the service of local accounts, track the time money circulates locally, and combine various communities.

Tempt money to circulate in the community: commission or exchange fee

One main argument for organizing a network of dedicated local accounts is the option to optimize the local multiplier. By adjusting the level of negative interest or commission on the money earned, the circulation of money can be influenced. If the fee is

set high, businesses will spend more quickly to reduce the amount that must be paid. They pass on the obligation to pay commissions to the company where they spend the local money, thereby increasing circulation. This pattern of people striving to minimize commission payments results in repeated rapid spending, allowing other businesses to sell and earn.

A dedicated payment network can ensure that the local suppliers of the anchors indeed spend the money earned locally, thereby enabling additional sales for the business community. The commission increases the local multiplier. Furthermore, setting a commission fee will deduct a portion of the extra income that companies start to earn due to the collective effort to buy locally. The money generated from that commission is needed to fund the premium required to attract money into the local economy, with a portion potentially contributing to a local investment fund.

An interesting opportunity such a set-up delivers is that money entering circulation as credit will also yield commission, serving as a source that can help make these credits interest-free. More on this in the next book of STRO, which will describe how credits in underperforming economies can be made interest-free and counter-cyclical.

Intensifying local circulation by charging a negative interest

In a note in Chapter 6, Fisher's Equation of Exchange (MV = PT) was mentioned. The volume of the economy is affected by the amount of money available and the Velocity of the use of that money. The choice of the anchors in Preston clearly strengthened the local economy due to an increase in the Mass of money. However, there is another part of the equation that focuses on how economic activities are affected by the Velocity of the circulation of money. During a recession, when part of the money gets hoarded, V dwindles. A low Velocity means little money is spent and slow circulation, resulting in a dramatic drop in sales and consequently in production. Only after that velocity has been restored, and the money flows through the economy as before, trade and production have a chance to recover. In a region facing a permanent depression, increasing the velocity of the circulation creates additional economic activity. In other words: using the little money available more often before it disappears from the region works wonders.

Apart from during a global crisis, the economic conditions in underperforming areas are quite different from the richer areas. Fisher's equation is widely used by economists, but usually only on a national level to establish how things are going or to justify certain policies designed to avoid inflation. For underperforming economies, it makes sense to research if the velocity of circulation in their community can actively be increased. Since the value of the currency of those regions is determined by others, there is no risk of inflation, although prices paid with local accounts could – yes, should – be affected.

Irving Fisher became so enthusiastic about the miracle of Wörgl and its local use of the negative interest tool to enhance the circulation of money, that he wrote the book *Stamp Script*. In that booklet, he promoted a non-digital predecessor of the Social Trade Booster. Dedicated currencies that would serve a specific community benefitting from the low interest that is enabled by an (avoidable) commission or by stamps.

Historical examples of how a negative interest boosted the economy

These days, thanks to IT, the Booster can relatively easily be introduced as an avoidable commission to make people spend the money they earned ASAP. History also provides examples from even before the IT era. In ancient Sumer and Egypt, a charge on not spending money resulted from the fact that that money was rooted in grain and the storage cost of that grain made money circulate rapidly and enabled interest-free loans to entrepreneurs. In the Middle Ages, the economies of the famous Hanze cities were thriving; thanks to a commission that had to be paid the moment the rulers called in the money for reminting. More information, called *From Sumer and Egypt to the Hanze Cities*, is published on https://www.socialtrade.nl/english/publications.

Compare the use of the time-tracker with an exchange fee

In Chapter 9, we argued that it is indeed important to have a fitting exchange rate to ensure a more effective circulation of money in many communities. The realization of a quasi-exchange rate could be accomplished with the introduction of a set of accounts that deliver a kind of sub-currency through the introduction of a reward for those who transfer their money into the local accounts, in combination with – and financed by – an exchange fee that is charged when money is transferred from the local account to an unconditioned account. As mentioned before, such an exchange fee that makes people prefer locally produced goods or services, however, is not popular with importing companies. They might start to refuse payments from local accounts, and that might affect a whole chain of local businesses. These businesses might even actively oppose the local accounts if they feel that a local payment tool is meant to hurt them.

To avoid this, STRO developed an innovative tool: The time tracker. This is a kind of hourglass that counts down the period that the money can only be used within the community and may not be transferred to a non-local account. Such a tracker makes money circulate longer in the community, for a fixed number of days. The money is always in somebody's account, so when a time counter is used, one knows upfront how much income the commission will collect, skimming the profits users get thanks to the increased local circulation. The hourglass fixes the number of days. With that, fee derived from the money entering local circulation is known upfront and can be used to finance a reward for the one who brings the money, the purchasing power, into the local payment environment to start boosting the economy. This way of collecting that Bonus allows most importing businesses that are at the end of a supply chain to accept payments on their local account.

The choice between an exchange fee and a time tracker combined with the commission fees is not an absolute one. A community can also combine both tools, for example, with the option to redeem the waiting time of the time tracker by paying the commission over all the days still to go to get the option to transfer the money to a non-local account immediately.

Unterguggenberger used the income from the stamps to in-crease the budget of the city. That allowed them to employ people to deliver public works. In the temples of Sumer, the income was used to finance the costs of storage, to counter the degradation of the seeds, and probably a part went to the temple priestesses. In the Hanze cities, the money acted as a tax that went to the king, the city, or the church. These entities probably used them to pay for their expenditures such as the army but possibly also to improve trade, construct cathedrals, etc. In any case, they spent that money locally. It did not become a leak but stayed in circulation. On top of that, all the money circulated rapidly!

The charge of a commission on unused money is a source of income that can be used to strengthen the local network in various ways. In Wörgl, the income from the stamps was used to finance public works. This allowed unemployed people with no income to earn money and spend it locally, while the water supply system was improvedand a bridge and ski jump were constructed. Wise improvements in local infrastructure strengthen the local economy; for example, businesses become more accessible, local energy generation becomes better and more stable, living conditions improve, the region becomes attractive for tourists, etc. But primarily it also provides people the opportunity to work and earn and spend that money. That money continues to circulate, thus also boosting the earnings of local entrepreneurs.

Other uses of the commission income

1) We saw that in the Booster context, income was earned because of the commission the whole period the hourglass of the time tracker was running. As argued, it is a reliable source to finance a premium for attracting money to enter local circulation.

2) In the next book, we will show how such a premium will also be collected over money that enters circulation as credit. Because this income is not needed to lure money into the local circulation, it can be used to diminish the costs of the credits, which will considerably help the options to introduce additional money in the community.

3) A community can also choose not to invest all this income in attracting outside money, but also invest (part of) that money. Or a city council can use the premium it receives to that end. This could be important because a underperforming local economy very much needs new companies with different specializations to reduce the need to import and elevate production and trade to a higher level. Like in Honduras, the money saved because of the local production of bio-fuels was meant to be used to import capital goods needed for the next steps in local development.

Investments in innovative initiatives can also support the long-term development of the community's economy. It would be beneficial if the community, especially existing companies, understood the benefits that start-ups deliver to the community. If they offer a new (type of) product or service or introduce an innovation, the community's overall development will be boosted. Ideally, the long-term improvement of the local economy should feel like a collective effort. Based on that involvement, community members might be prepared to make an extra effort to buy from those businesses and also to assist them with advice. This would create a situation similar to the successful Islamic community bank approach of Mit Chamr in the 1960's in Egypt, where local savers participated in existing businesses and supported them not only with credit but also with advice and clientele. In the end, a strong productive base of the region's economy is very important for everyone.

> The objective of the Social Trade Booster is to guide trade into something beneficial for everybody in the community by making more effective use of the money that is circulating locally until a point is reached where there is enough money circulating to connect local actors and boost local production, trade, earnings, and jobs.

What impact can be expected if the social trade booster is applied?

In all the cases we studied, we witnessed a considerable impact. Part of it is psychological: in Fortaleza, people proudly mentioned that they live in the neighborhood with the bank. Part of it is tangible: the cans, plastic, and paper lying in the streets in the neighborhood are no longer all collected, indicating that there are fewer very poor people. One can also observe that on various houses, a second floor is constructed. This is also a sign of reduced poverty and growing wealth.

Preston was elected as Britain's Most Improved City and the Best City for Families. The successes of Wörgl made newspapers describe it as a miracle and convinced Irving Fisher to promote Unterguggenberger's approach in the US. These are tremendous achievements with huge impacts.

At the same time, a great many initiatives that called themselves local or complementary money have failed. These can easily be confused with the Social Trade Booster. So, let's have a look at the differences.

First and foremost: Many of these initiatives have no backing in national currency. That is why they are called complementary currencies. One cannot pay taxes with them. These initiatives argue that the national currency (often referred to as fiat money) also lacks backing. While this is true, the law says that companies and the government are obliged to accept the national currency as a means of payment: this fiat money is legal tender, the money that we are obliged to use when paying taxes.

This is not the case with the complementary currencies. It is extremely important how such a currency is backed and how many options are available to use them for one's needs. Ultimately, the complementary currency would be exchanged for or transferred to the national currency to pay national taxes.

What these initiatives do have in common with the Booster approach is that they also criticize the effectiveness of the dominant money and argue that money should serve communities better. But the nature, especially of the backing and use, is so different, making them, for most businesses, hard to deal with. Where local authorities and the anchors transfer unconditioned national currency to the local payment environment, these digital accounts have an alternative ruling stimulating to spend that money locally.

> Booster accounts do not harbor an alternative or complementary currency but focus on conditioning (the use of) the national currency.

All in all the impact of the Booster depends on the setup, the organization, the organizers, and the scale. That's why we describe the Social Trade Booster approach in all its aspects: backing, exchange rate, and ruling, and we advise starting with the Preston approach, making big spenders focus on long-term community development.

In the end, it all comes down to increasing the availability of purchasing power in the community directed at local businesses. *The General Theory Of Money Interest And Employment*, written by John Maynard Keynes, dominated economic thinking in the period 1936 up to 1980 and made it clear that a lack of demand results in few economic activities. Keynes influenced policy-makers to prevent depressions by taking care that there would be enough demand for goods and services in the economy. A follower of Keynes, the first Nobel Laureate for Economy, Professor Tinbergen promoted fighting poverty in poor regions by increasing local purchasing power.

This line of thinking was overruled by Reaganomics and Thatcherism. Their line of thinking focused on the offer of new products created by innovations. According to them, that was the central driver of the economy. While this might be the case for the richest areas, and especially for products based on new technologies, it is surely not true for markets where the population has very little money to spend. In those economies, the options that local entrepreneurs have to earn a living are still meager, providing few opportunities for businesses to start, survive, and stay in business.

As we argued in earlier chapters, we perceive that many underperforming regions face a quasi-permanent depression because too little money is provoking local businesses to produce and local production for local consumption does not reach any scale. That justifies a focus on the availability of demand and its focus on local businesses as was actualized in Preston.

The booster approach

From the STRO R&D, we concluded that, for quite a few communities, the key to development is to generate enough demand focused on local producers. To that end, we developed the Social Trade Booster to improve the use of the available money, make its use more effective, and have the money stay within the community for longer.

Elements of a successful approach are:

- The volume of money entering the network of local accounts, relative to the overall volume of money in circulation.
- The number and variety of businesses that have opened a local account and accept payments on it. This is partly relative to the number of businesses and the variety of their products available in the community. This is a key factor in the potential of circulation in the (business) community.
- The anchors are important to boost the local circulation of money but also play an important role by accepting local payments. Initially, the acceptance of the vouchers by the government to pay tax debts was essential for Wörgl to pass the difficult first period. It helped people trust the vouchers. Over time, anchors might receive almost as much payment in their local account as the volume they can spend locally.
- The fact that the company of the mayor's wife also accepted vouchers as payment added to that trust. A well-known and trustworthy company that joins in the initial stage can help others to join and accept payments through local accounts.
- If retailers are the only businesses left in a region, and there is no local production, it takes more time to reconstruct the local economy. More side programs are needed, such as there were in the Gota Verde project (APLN consciousness training, community supported new businesses, training for new entrepreneurs, demonstration projects of housing construction with local materials, etc.).

- The economic situation and the level of underperformance in the targeted community. If businesses have spare capacity, the importance of clients is immense, and the marginal profit is such that the companies dare to risk trying something new.
- Public support and involvement. The public should feel that something is going to change for the better. That feeling should be strong enough to counter a tendency of lethargy that often undermines poor communities. It is also needed to gain acceptance of essential tools such as the length of the period the time tracker keeps money local and the understanding and acceptance of the avoidable commission.
- Interest-free credits to local companies to finance commercial capital and to finance investments, which will be the topic of the next book.

Resistance to the social trade booster

Any innovation meets resistance

When President Roosevelt sought ways to address the Great Depression, he was advised by the most famous US economist of that time, Irving Fisher, to emulate the example of Wörgl and introduce a levy on hoarded US dollars, similar to Wörgl's stamp script. The President consulted a group of advisors and civil servants to gather their thoughts on this unconventional proposal. Their conclusion was that it might very well end the crisis, but the effects on the distribution of wealth might be substantial and certainly unpredictable. President Roosevelt was not willing to take that political gamble, so he preferred The New Deal approach. In the end, it took World War II to bring an end to the depression.

Machiavelli once concluded that nothing is more difficult to prepare, more doubtful in terms of success, and more dangerous in terms of effect than setting oneself up as one who wishes to make innovations. Those who do so, have enemies among those who

benefit from the current condition, while they find only lukewarm defenders among those who could benefit from the innovation.

STRO has been confronted many times by authorities that preferred well-known approaches, often with a track record showing no results. They favored these over a solution that was new. They were not aware of the results of the ancient grain giro, the medieval bracteates in the Hanze cities, the vouchers in Wörgl, the Fomento neighborhood money of Banco Palmas, the successes of Sardex in Italy, etc. Also, many authorities presumed that local procurement, such as that practiced in Preston, is illegal. The EU study mentioned on page 232 proved that this is not the case.

One solution to deal with politicians who are hesitant to get involved in structural change is to present the Booster as an experiment that will be evaluated after four years. Note: not a pilot in the sense of a limited scale, because to make money circulate, the scale should be large enough! By limiting the period and evaluating the results, as happened in Santa Coloma (see the next chapter), politicians can feel more secure. If that last condition is met and the anchors are fully engaged in the process of buying locally using local accounts, the four years will be enough to deliver results that will make people want to continue. At that time, quitting the Booster will then have become the “change” as in Machiavelli's observation. Also, enough people will have benefited, and most probably the businesses that experienced its positive impact will actively advocate for the continuation of the Booster.

Central banks have become more positive

In Chapter 2, we saw that the Austrian Central Bank killed the “Wunder von Wörgl” for fear of (hyper)inflation. The primary aim of these banking authorities was to safeguard the value of money. They did this by keeping the money supply very tight. That policy had a disastrous impact because, at that very moment, as private people hardly dared to spend their money, it was robbing the markets of money. The poor prospects made companies stop investing, while consumers tried to spend as little as possible to save up to deal with these bad times. Money was hoarded rather than spent, and additional money was not supplied by the central banks.

So the question is legitimate and important: Will the central banks have objections to local accounts? With a different type of digital bank account, this will be no problem. In the example of Brazil, Banco Palmas and STRO were brought to court by the special prosecutor of the Central Bank of Brazil because of the creation of the physical Palmas money. And even in that case, once the court had ruled in favor of the Palmas, the Central Bank changed its position. Some years later, we were requested as lecturers at a conference the Central Bank organized on the topic of local money. This also resulted in a law that regulates electronic money that provides a lot of space for initiatives for the good of the poor.

Another initiative using Cyclos software, Sardex, on Sardinia, regularly discussed their approach with both the Central Bank of Italy and the tax office. Both were pleasantly surprised by the way Sardex functions and the contribution it makes to local MSMEs, as well as the options Cyclos offers to prevent tax evasion and deliver transparency.

In most countries, banks may offer various types of accounts, each attaching specific conditions to these accounts. Current accounts, family accounts, and deposit accounts that have a fixed term that the owner cannot touch the money. The important thing for the Central Bank is that the overall volume of the money remains the same. The Booster needs local deposit accounts in which the conditions do allow the transfer of money during that deposit, but only to likewise accounts in which the deposit period can be transferred with the money.

An interesting development these days is the introduction of digital money by central banks. It would not be too difficult for the

central bank itself to add dedicated local accounts to its digital currency. If these would enable regions to introduce a quasi-exchange rate that would better fit with the regional economies, the digital currency initiative of the central bank would open the option for communities to optimize their potential while in parallel delivering a more stable development of the overall economy. If the ECB would facilitate such diversity in their digital euro, they would partly solve the negative aspects that the euro has for marginalized regions in Southern and Eastern Europe while maintaining the positive elements of the Euro.

Powerful people do not like to lose the option to distract interest

As you can read in https://www.socialtrade.nl/english/publications, the Egyptian version of the grain Giro flourished for almost 2000 years from the "days of Josef", somewhere around 1600 BC up until long after the Roman occupation (around 300 years AC). The Romans that occupied Egypt were accustomed to gold-based money and, consequently, interest on loans. We can imagine that Egyptian entrepreneurs preferred to borrow interest-free money in the grain banks over the interest-demanding money the Roman banks offered. That would not have been to the liking of the rich Romans. We do not know what happened exactly, but we can imagine that this provided a good argument to forbid the grain Giro.

In any case, these days the mighty loan sharks and various banks will not like that an option arises where the rules guiding the accounts facilitate an interest-free environment. Even pension funds might oppose it because the more prudent funds have invested a lot in interest-based products. People might focus on that loss and resist lower interest because it brings their pensions under stress, while they are not aware that a huge part of what they pay for housing and consumption is needed to reward the money invested with interest.

Most people will only want the positive result, not the instruments that realize these

The avoidable commission or stamps presented new additional costs to local businessmen. That is something they are not accustomed to. These costs are easy to see and far more visible than the longer-term effect of the extra earnings because of more intensive use of the money available and the option to pre-finance production interest-free. At first glance, this cost can be seen as inflation, which does not make it very popular. So people must understand the benefits, and organizers will have to bring these forward actively. That was the case in Wörgl, where all felt the burden of the stamps immediately, but the situation was so bad that any cure was broadly supported. What might have counted is that everybody had a relative who no longer had a job and got dependent on the jobs Unterguggenberger created with that income. In situations where the economy is relatively doing well and the local accounts are introduced to stimulate the circular economy and increase the resilience of the community, communication and the management of expectations will be much more important.

People do not look for solutions because they are export protagonists

Up until some years ago, the Washington Consensus forced austerity programs on poor countries and made them focus on exports. At some point, the proof that this focus only crippled the economies of poor countries had grown to such an extent that it could no longer be ignored. In words and in writing, the World Bank and IMF adapted their course. But even now, the importance of exports is overrated by many people. The simplicity that exports bring in additional money makes people blind to the setbacks. The first of these is the risk that the export would introduce a situation where the Dutch Disease damages other businesses. Next, the focus on exports often centralizes the flow of incoming money, introducing the risk of corruption and an increase in income polarization where the income ends up in the hands of people who use it to import luxury goods. The result often is a neglect of the development of broad clusters of small businesses, which is crucial for the local economy.

For people in power subsidizing people with the yields of export is, and stays, very attractive. This makes them feel there is less urgency to provide their city or region with a more structural solution to accrue wealth through improving the conditions for smaller businesses and unemployed or underemployed people.

Strategic Considerations for the Fine-Tuning of the Booster Rules

When considering and preparing an application for the Social Trade Booster, one has to develop a strategy for the introduction and a growth path and fine-tune the rules of the account that will be offered. Out of the many considerations, we would like to highlight several:

1

How much will be invested?

An investment that deserves serious consideration is the expenditures on the costs of upfront communication on the objectives and on the tools such as the local accounts and the combination of the avoidable commission and the time tracker. In Gota Verde, the local payment tool was combined with creating awareness through the APLN method (Appreciate What is Ours). This opened the way for community-supported business start-ups (see Chapter 8). In most situations, it will be wise to invest time to get the commitment of the population for the settings of the time-tracker and commission and prepare for this process of decision making. That commitment should be based on the awareness of what is needed to improve the economy.

2

When and how to use credit in the Booster program?

Next to the inflow from the expenditures of the anchors, credit might be a way to introduce means of exchange. In Latin America, regulations might often make it more difficult for local governments to fully participate. In that situation, money creation as credit might be needed to get to a volume of localized money that is big enough relative to the overall volume of purchases in the region. Read more about this in the next book.

3

What is the general condition of the local economy?

Is there enough easy-to-engage spare capacity or are these capacities hard to mobilize, for example, because of a culture of poverty?

Businesses that have more potential clients than they can serve will have a different stand compared to companies that have spare capacity and an urgent need to increase their sales. If a company has no spare capacity, it can easily decide to waver the offer to supply the anchors or the supplier of the anchor. Keep in mind that the Social Trade Booster is a counter-cyclical instrument for local economies. In situations where the economy functions better, the level of the commission and the length of the period the time-tracker forces the money to stay local might be set differently.

4

High inflation in the national currency might make the organization of a local payment platform more difficult.

In the case of a national currency facing high inflation rates people might not spend faster because of the costs of the commission fee.

As argued earlier, the local conditions should determine the precise layout of the project. In the showcase of Santa Coloma, the strong determination of the political leaders and the very difficult position of commerce were key in the design. The choice not to introduce an avoidable commission was a logical one but has as a consequence that the project does not collect the income to finance itself and to start a credit program to boost local investments.

Often a step-by-step approach is wise, starting easily and making conditions such as the time tracker a bit stronger every time a pre-mentioned target has been reached.

5

Getting the suppliers of the local government involved

Local suppliers of the anchors will applaud buying locally by the anchors. But will they follow the lead of the anchors and spend locally themselves? Will they accept that this will be enforced on them by the anchors paying them on a local account? And will they see the advantages of the commission charged when they do not spend fast enough? Or will they expect to become the participants who cannot find enough options to spend and foresee that the commission becomes an unavoidable punishment? Next to upfront engagement, before the anchors switch to buying locally, the answers to these questions will depend a lot on how easy it will be to spend the localized money. In other words: how many local businesses are accepting money under that ruling and how diverse is the local economy? Or, for the smaller companies, how easy is it to use that money to use as salary and pay part of their private purchases locally? All in all, it makes sense to take time to prepare and have many companies open an account before the anchors start paying through the dedicated accounts.

6

Starting moderate or starting smart?

The user of a local account can see the time tracker on the app. This makes it easy to see how long to go until the money can be spent everywhere. Pretend for a moment that the period would be 10 years. Such a long period would put the money in the local accounts in another league than the national currency. Most people would feel that money in such an account is a lot less attractive than having money in a traditional account. Probably, joining the local accounts would be avoided by so many businesses that the introduction of the Booster would fail.

Or imagine what happens when the time tracker is set to three weeks. In that case, everybody would forget about the special ruling and act as if the money on the local accounts would just be like money on other current accounts. A Booster initiative might start with a time tracker that keeps the money local only for a short period and would charge a very limited commission during that time. While this makes it easy to convince businesses to open a local account, the local economy will hardly get boosted. Increasing conditions over time, strike back unless people know that this is needed to increase the impact. The strategy is to gradually extend the period of the time tracker as soon as there are more opportunities for spending local money. It's a strategy to deliver increased turnover in the local economy, but it needs clear, upfront, and persuasive communication.

The same question is to be faced when one sets the level of the commission. A commission of 0.1% per month would not have any effect; it would not make money spent faster in the community and it would not provide enough income for a premium that is high enough to seduce money to get localized. A commission of 1% per day could finance a very attractive premium but few people would like to earn money ruled with that condition. One way to deal with this is to offer the option that companies with good reason can request a temporary exception for part of their earnings.

In places where the inflation in the national currency is moderate, once most businesses have opened a local account and local circulation is augmenting, the time tracker could be set to one year and the commission at 1/30% a day.

Clearly, in a community where the variation and the number of local companies are limited and do not permit circulation, conditions will have to be easier. Initially, it might be better to use an exchange fee instead of the time tracker. In that case, that exchange fee will pay for the premium to reward transfers of money from national accounts into local accounts. A broad understanding of the importance of an adequate exchange fee is important. Otherwise, the local economy keeps on suffering the setbacks of a not fitting exchange rate and a prisoner's dilemma that leads to more imports at the costs of local production, bleeding the local economy till it structurally underperforms.

The settings of the time tracker, the commission and possibly the exchange fee, decide what level the premium can get. Once the system is more mature, not all income of the commission will be needed to pay for the premium plus to cover the organizational costs. Once this is the case there is the option to involve the population in the decision of how the rest of the income from the commission could be used for a further development of the community. This could be an important moment to conclude collectively whether such money should be invested in new companies that can replace imports (think of the investments in the production of biofuels in the Gota Verde project), or investments in innovative companies or in the local infrastructure.

Increasing the period of the hourglass will be easier than raising the commission. For that reason, as mentioned, it might be smarter to set the full commission from the beginning but allow transfers to non-local accounts rather soon. Another option is work with a longer periode and a fee of 1/30% per day but return a (declining) percentage of that contribution. It makes people aware of what should be the situation, but that that policy is implemented in a realistic way.

Might there be outside investment money available to finance the start of the Booster, the period set in the time tracker might be set a bit shorter. Since that reduces the income because of the commission, it should be clear that soon the hourglass will be set to a longer period. This decision could be linked to the number of businesses that open a local account.

7

Fine-tuning the commission

Digital local accounts can charge the commission per day, hour, or second. The 1% monthly cost of the stamps in Wörgl equals a fee of 0.03% for each day money is not yet used to buy something from another participant. This 0.03 of one percent is not much, of course, but it does provide a signal that to increase the mutual, social trade economy. It is important that money is being actively used by spending money soon after it is earned. In this way, one allows others to earn as well. People who wait – let's say sixty days - before spending the money they earned, will lose 2% of their earnings, the same cost as two stamps in Wörgl. Even that is not much in business terms: in certain industries, a company can get a 3% discount by paying within 30 days. In many traditional local loyalty programs, participating companies pay on average between 1% and 3%.

8

Chicken and egg

The need for the anchors to spend a vast amount of money through the local accounts and a majority of local businesses joining these accounts provides a chicken-egg problem. This stalemate can only be prevented by upfront communication. The anchors must make clear that they *will* give preference to businesses with local accounts and that they will continue to increase the percentage of their procurement spent locally. So, every company that wants to be their supplier should better open such an account. And companies that want to sell to these suppliers should do that as well. The determination of the anchors combined with well-managed communication should do the job.

9

Selling the goose with the golden eggs

The Social Trade Booster is based on the idea of excluding the competition on scarce money from the local market and collectively countering the prisoner's dilemma that makes money leave the community before it has serviced the local economic potential. The basics of the role of money in the economy are essential: enable the local community to specialize and increase productivity. Where possible this should lead to replacing imports and anyway should increase local production for local consumption. A logical target is to improve housing using local materials and local labor. Remember the ecocasas in the Gota Verde project. In that same project, the community pooled resources to enable women to start the businesses that they dreamt of, and the local payment tool ensured that they could make a living and compensate for the support of the community. At the least, the quality of housing can be improved, and services can be extended if the organization of the community switches its focus to what it can do by itself and social trade is facilitated.

All okay, but sooner or later someone will suggest reducing the commission and shortening the period of the hourglass of the time tracker. Maybe even with the argument that the situation improved. Other people might argue that the income of the commission should be used to the advantage of the businesses that paid for it. They come with a few examples where the commission took a serious part of the marginal profit that companies made.

In short: there will always be people who promote selling the goose with the golden eggs: reducing or ending the commission and the time counter, while leaving the local accounts. The community should resist this. Commission and circulating time should only be reduced if the productive potential of the community is optimized. Even then the Social Trade environment should not be annihilated but hibernated at a minimal level to be ready if the tide turns worse.

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The next chapter provides a real-life example. This showcase is researched and the chapter is written by Lluís Muns and deals with an example of how the city of Santa Coloma boosted the multiplier of part of its budget. Examples such as that in Santa Coloma show how the use of the Social Trade Booster tool can and should be adapted to the local circumstances. In many places, authorities think of themselves as behaving responsibly by the traditional way they are spending money. The city of Santa Coloma challenged this paradigm by prioritizing the focus on the impact of public funds on the long-term development of the local economy.

This is a funny change of paradigm because most authorities will name themselves responsible when they oppose the introduction of a Fintech innovation, as terra incognita, not to be touched. In line with Santa Coloma we may conclude that they do not serve the long-term public interest well enough, by being hesitant to innovate for reasons to serve the common interest. It is not only that they under-use public funds, these authorities don't act while the social structure of society is deteriorating.

Chapter 12

Santa Coloma

Introduction

Applications like those described in earlier chapters gave birth to next-stage developments, such as the projects in Sardinia and in Santa Coloma, which became the stepping stones for the further development of the Booster. This chapter shows how much a dedicated city council can do.

Santa Coloma de Gramenet, a city with 120,000 inhabitants of more than 100 different nationalities, is located in the metropolitan area of Barcelona. The financial crisis that started in 2008 hit the city very hard. Businesses suffered and the local government only saw its expenditures increase but not its income.

The proximity of the city of Barcelona accentuated certain problems for the businesses in Santa Coloma as rents increased due to strong competition from the proximity of two large shopping areas. One of them, the largest in the region, is just a fifteen-minute walk from the city center of Santa Coloma. Faced with this reality, the city council came up with a bold idea: to be the first Spanish public administration to condition part of its expenses to improve opportunities for local businesses. The first step involved joining the Digipay4growth project, organized by STRO and promoted with the support of the European Union.

It was a challenging initiative, as the lack of known references went hand in hand with an internal corporate culture adverse

to change. Nobody had an idea of the potential and scope of that pioneering adventure, but an enthusiastic team was formed that took it as a challenge. Who could have foreseen that ten years later it would result in a new way of managing public resources, and that out of every € 100 of public spending no longer € 71 leaves the city immediately but only € 9.70? The implementation of the new payment tool achieved a spectacular improvement in money multipliers from 1.85 in 2014 and 2015 to 5.85 in 2022!

A new interpretation of public spending based on economic and social impact

The city council of Santa Coloma feels responsible for making the money collected from the citizens to serve the community well and stay longer in the city. But how to do that? How could public expenditures have more impact without additional resources? The first thing to find out was how many transactions the money spent by the city actually induced. When would local companies no longer benefit?

In 2013 the city agreed to become a partner in the European project *Digipay4Growth* initiated by STRO, which focused on increasing the impact of the expenditures of the city by spending through a local payment channel.

The focus on increasing the impact of expenditures was a real paradigm shift and a daring political gamble. It affected the corporate culture, dynamics, processes, and internal operating protocols, placing the city's organization in an unknown territory. In the case of Santa Coloma, the initiative was actively supported by the trade department. This was a logical step since that department was, even before the start of the project, looking for new ways to support local businesses. Their enthusiasm enabled them to do a great job in introducing the initiative to the appropriate referents.

The first budgets that the city assigned to be paid through the local payment facility were subsidies in the areas of sports, commerce, and culture. Also, subsidies related to the solidarity economy and subsidies related to catering and entrepreneurial activities were targeted. From September 2022, part of the aid for vulnerable people at risk of social exclusion has been included. The locally earmarked money can be used within a network of local businesses that offer their products, services, and knowledge.

The impact of the local multiplier (2014-2022)

Most often everything that happens after the city spends its money is disregarded. Most governments only look at the conditions of the payments and do not see that as a process of injecting money into the community. For the wellbeing of the community, however, nothing could be further from the truth, as it is just as important to determine how to increase the impact of that money on the local economy. Where will recipients of the money spend it next? With a local payment facility, the local use of that money can be affected. *Santa Coloma's experience shows how much these indirect social and environmental impacts can be affected.* The money of these expenditures circulates in the city in greater quantities and for longer periods of time. But the habits of local businesses and entities also changed. It became clear that while the connections with the outside world were not really changed, the local relations were strengthened and the use of all incoming money was optimized.

Aware of the need to generate credibility, the Santa Coloma City Council included in the project's roadmap a serious research effort. Results were continuously analyzed and evaluated. Once implemented, the use of STRO technology made it possible to monitor the circulation of the money permanently. The multiplier effect of money is an economic concept used for this circulation and to emphasize the chain reaction of expenditures. In other words, the target is to increase the output and the employment opportunities resulting from the money spent or invested. Making expenditures result in income that can be spent again in an upward spiral. This provides an example of the multiplier effect of money as developed by John Maynard Keynes, one of the greatest economists of the 20th century.

The *local* multiplier measures the number of transactions in one year that money spent by the city facilitates till the moment that money leaves the local payment circuit and is used as common euros. A local multiplier of 1 means that the person or organization that was paid by the city on a local account does not buy anything local with it, but spends the money directly outside the municipality. An increase in the local multiplier indicates that the persons or organizations that received money indeed spent that money locally. The higher the multiplier the more times that same money is used locally.

Managing public resources properly is an important ethical imperative for the city council of Santa Coloma. It made the decision not only to count for the moment of direct spending but also consequently: how the money served the community after that moment. This developed the need to gather information on the progress of this change in paradigm.

In order to allow comparisons over time, research was executed before the project started and the same method of calculation was maintained during all the years of the project. The research was done under the supervision of the commercial department of the municipal government and under the direction of analysts Marta Segura and Lluís Muns. Continuous follow-up studies were thus carried out during the ten years.

This resulted in the following information:

Multiplier		
	Before introduction of the local payment tool	After introduction of the local payment tool
2014	1,85	
2015	1,85	
2017		1,95
2018		2,88
2019		11,16
2020		3,64
2021		5,38
2022		5,85

What we see in these data is that the city council increased the impact of these expenditures more than 3 times. (Note: This is an average. A portion of local euros was exchanged for regular euros without being used locally, while another portion circulated much more than six times.). The year 2019 was exceptional because the amount of local currency entering the circuit was much lower than in other years and the amount of withdrawals was much higher. Moreover, the timing of local currency inflows into the circuit in 2019 favored the first months of the year, which also affected the local multiplier result. Despite the short time perspective of the analysis, the upward trend recovered for the years 2020-2022. The minimal impact of the COVID 19 pandemic on the local currency is worth noting, as the upward trend of the index was not only maintained, but even increased.

In addition to the volume of money in circulation, the research also tried to determine how patterns and trends developed over the medium and long term. To this end, the technical office monitored the number of transactions every day, combined with trends in the amount of money transferred. The table below shows the annual increase in the number of transactions in relation to the amount of money that was traded.

Volume of money in circulation		
	Transactions	Total value (€) of the transactions
2016	3	6,750.00
2017	2,490	315,234.61
2018	11,588	782,728.50
2019	13,304	1,062,761.43
2020	12,137	1,204,552.31
2021	16,117	1,431,872.01
2022	23.370	1,560,172.09

The 3 major phases of the project

We can split this period in three major periods:

- **2013-2019: the idea was developed and the legal, technological and operational architecture was designed.**
- **2019-2023: the start-up and the actions carried out by the technical office of the project, which facilitated the development of a network of truly committed users made up of 150 associations and more than 500 companies.**
- **After 2023: scaling of the project and the introduction of more money in the local circulation.**

2013-2019: The project preparation

We have to stress how important it was that the Santa Coloma City Council itself gave leadership to the project. From the beginning, the language, conditions and rhythms were marked by the municipal operations. Therefore, the promoter team was obliged to follow a disciplined and rigorous execution process in the phases of planning, implementation, consolidation. These preparations coincided with the European Digipay4growth project. The implementation stage even lasted until 2019 and culminated with the creation of a technical office for the management of the currency. In the following section we will learn more in detail about these two stages and, in particular, the decisive approach of the technical office that allowed the consolidation of the socioeconomic network of the currency in the period 2019-2023.

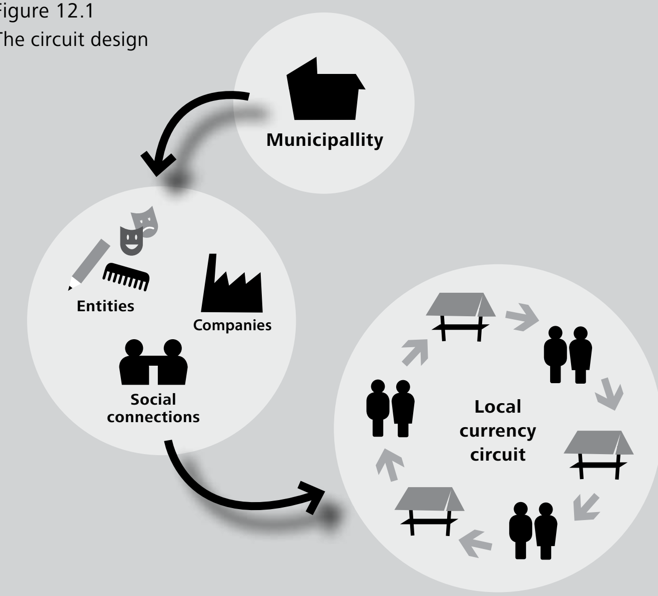
The preparation consisted of the following parts:

1) **Planning**
Crucial in the planning was the availability of a payment system that could make euros follow a new and different path after the government had spent these. As important was to develop a highly competent team of professionals, get the enthusiastic dedication of the staff of the commerce department and the municipal treasury, and ensure political support.

2) **Operational**
This stage focused on internal protocols to provide solidity and security to the organization and the local socioeconomic fabric. The operating regulations became the core reference element of the system and facilitated the understanding of the project at different levels: the city's local payment initiative was not just another experiment of a local currency, like so many others, but focused on linking the current expenditure of salaries, public procurement and subsidies to a local payment instrument owned by the community that was capable to condition the money in favor of the community.

Santa Coloma's approach focused on the idea of acting not only with companies or citizens but also integrating the local associative fabric strongly. The first target was to make the expenditures by beneficiaries of the municipal subsidies done locally at companies participating in the local payment network. In that way, the money would continue to support local value chains by purchasing products, services, and knowledge from other companies

Figure 12.1
The circuit design



in the same network. So, the driving principle was answered: the money the city council had collected from the citizens of Santa Coloma would serve the community better. Once the circuit was designed from a technical and operational point of view, a participatory process was carried out to position and give the localized money its own identity, involving the citizens, who decided to name it Grama.

Legal
The idea was to develop a sound legal framework that delivers guarantees for all participants. Thanks to the support of the University Pompeu Fabra (Barcelona) and STRO, in the context of the Digipay4Growth cooperation, a solid and comfortable legal architecture was developed that was perfectly integrated into the organization's operations.

The jurists of the Pompeu Fabra who developed the legal framework in close cooperation with STRO and discussed that with the Central Bank of Spain. Important elements were preventing the use of the payment tool for money laundering and financing terrorism. Also, the protection of the privacy aspect and the data were dealt with. After these consultations and also having consulted at the highest level, with the authorization of the Catalan Competition Authority (ACCO), it was decided that the Santa Coloma payment tool would acquire the legal form of a digital multipurpose voucher.

Technological

The technological mission was to get a reliable and robust technological system and integrate it into the dynamics of public expenditure management. Also, it had to enable the delivery of the data to check progress. From a close collaboration between the legal and economic teams, the necessary parameters and indications, a Catalan IT office was asked, guided by the STRO team, to configure the Cyclos payment software tool and integrate it into the municipal operation in a consensual manner with the IT department of the city council.

The initial doubts by potential users about the virtual currency were easily dispelled by the personalized, close, and accurate support provided. Moreover, the non-existence of a physical currency acted as a catalyst of high strategic and fundamental value for the system since it enabled to speed up the process of structuring the information needed to manage the project properly in real-time. At that time, this type of data was only available to banks or large private corporations, so the public administration could not get the facts/data needed to increase the effectiveness of its interventions. For the city council, the use of an advanced, reliable and secure technological tool, and the obtaining of guarantees and certifications on the chosen technology by an independent team were non-negotiable conditions and allowed the project to move forward.

Economic

Analysis of the data of the expenditures that beneficiaries of subsidies had received in previous years helped to draw up impact maps that provided valuable knowledge on what had happened in the past with public resources. This helped to ensure a minimum viable circulation of the money in the local accounts and facilitated a diversified distribution aid among companies.

For the council's strategy, it was important to know how much of the money spent each year by the city council resulted in additional economic transactions in the city and how much was spent elsewhere immediately? This information was a valuable resource throughout the project. It also proved to be very useful in conversations with the early adopters:

> Out of every € 10,– that the city council paid out in 2014 and 2015 in subsidies from the areas of commerce, culture and sports, only € 2,90 stayed in the city, while € 7,10 went outside immediately.

3) Design

All this resulted in the following design:

- A 1:1 equivalence was guaranteed between money that circulated locally and the legal tender - euros. The euros that normally would be transferred to the beneficiaries were transferred to a dedicated blocked account. Automatically with the deposition the city received the same amount in local euros to be transferred to the beneficiaries.
- Entities receiving subsidies agreed voluntarily to receive a certain percentage on their local account. The information obtained from the historical expenditure of previous years was used as a starting point.

- The city council increased the sum that went to these amounts with a 5% bonus. That made it attractive to choose to be remunerated in the local payment tool.
- Withdrawals requested before the 45 days got a 5% penalty. After these 45 days, the local euros could be transferred to a common euro account without penalty.

4) Implementation

The implementation process was managed by the city council's commerce department supported by some of the staff that had participated in the design of the planning phase. The fact that the initiative was led by the Santa Coloma city council itself continued to strongly influence the form and atmosphere surrounding the project. During the planning phase, the first one hundred companies had agreed to accept local payments from the associations that received subsidies from the city. These early adopters, however, were too few to achieve an acceptable circulation of the currency. The administrative rigidity imposed by the city council forced participants to complete excessively bureaucratic and complex processes and made it difficult to join. In addition, some confusion in the start-up messages did not help to create the ideal atmosphere, nor did the fact that the first municipal contribution in Gramas was made entirely to one single association. This happened at the end of December 2016, and between this date and the month of February 2017 the team realized that the recipient entity had difficulties in spending the Gramas due to its uniqueness. in this period there were only seven transactions with Gramas. Clearly, this was a very poor result for so much effort and time invested.

In the following months, more diversified and smaller subsidies in Grama brought more dynamism to the circuit. The most important achievement of this initial experience was the powerful message that was built up, since effectively, at the end of the first year of operation, 9.5 out of every 10 euros of public expenditure

linked to the local currency remained in the city. The study on the money multiplier, however, showed that the circulation was very limited: before the implementation of the currency the index was 1.85 and at the end of the first year of circulation it barely reached 1.95 (2017). In other words, the local money was not exchanged for euros but also was hardly used.

These results did not discourage the municipality of Santa Coloma, which continued to pay a part of the subsidies it granted to local entities in Gramas. Gradually the circulation increased to more companies in the network. Nevertheless, the circuit operated by means of reactive actions based on trial and error, which generated certain internal tensions among the personnel of the commercial and treasury departments of the city council due to the considerable increase in the additional workload of the implementation of the currency project.

In 2018, after five years, there was an unquestionable need to reorient the project. Importantly, the political commitment was still intact and the municipal operations, although strained, were working. Local businesses were increasingly accepting the new instrument. The team of professionals managing the project came to the conclusion that a local payment system was part of a broader process of change that transcended the organization itself. A process that involved learning how to foster an appropriate and inspiring environment for the population to take ownership of it in a natural way. To that end, instead of a focus on motivating individuals, it was needed – and possible – to generate a general context that motivates people. Finally, the city council decided to create a technical office with the sole mission of consolidating the city's initiative over a period of four years. It also increased the part of the city's expenditures spent through the local payment tool.

These decisions proved to become the detonator that made the local payment tool of Santa Coloma a success.

2019 - 2023: The Local Socio-Economic Fabric – the engine of the project

Local circulation required the active participation of a network of local entities and companies. They suddenly found themselves with a new instrument that introduced a paradigm shift in the way local companies related to each other.

The realization of a technical office was the lever of change that the project needed. With the valuable learning acquired throughout the implementation process, the combination of experience and enthusiasm on the part of a renewed team made it possible to develop a new approach. Even so, the objective of reducing the workload of the staff of the town hall by shifting the work to the new technical office was only partially achieved, since the monitoring and correct functioning of the administrative operations continued to be carried out from the town hall itself.

The fact that the city council dealt with the administrative intervention (payment of conversions, auditing and management of subsidies, etc.), allowed the technical office team to focus on its main mission: *to weave relations of complicity and quality between the companies and entities of the network, preserving the idea of increasing the impact of the municipal payments.* The new four-year horizon created stability and allowed room for monitoring, follow-up and analysis of the state of the system, advanced communication management and design thinking methodologies. It also allowed placing people at the center, based on the following guiding principles:

- **Principle of creating a suitable environment**
  The proposal to consolidate the Santa Coloma booster would no longer focus on the initial idea of making people responsible for using it, but would instead focus on fostering a suitable environment that would inspire them to take ownership of it. In other words, the team would not devote efforts to motivating people, but to the context to make the project a success.

- **Principle of prudence**
  The local payments weren't fully integrated yet into the dynamics of local businesses and associations. The team should rethink new processes, increase the degree of user engagement and improve the perception of the project.

- **Principle of voluntariness**
  The team developed a personalized approach adapted to the different typologies, sectors, and realities that coexisted in the circuit, understanding voluntariness in participating as a fundamental right of the users.

- **Principle of earned data vs. captured data**
  Priority was given to obtaining quality data based on the idea that the use of the Grama generated quantitative and qualitative information, with a clear differentiation between two types of data: captured and merited. The former would be coming from the software. On the other hand, the deserved data would be the result of acts of trust and the fruit of personalized communication carried out by the coin's team with the aim of building relationships.

- **Principle of intrinsic motivation vs. extrinsic motivation**
  The team focused on attracting new users based on intrinsic motivation on the project's aims and far less based on obtaining the 5% bonus. It made the following efforts:

  – *Reorientation of the denomination of the coin.*
  Until then the Santa Coloma coin was known by the name of Grama, but with the appearance of the technical office and the development of a powerful communication plan we decided to rename it in the media #Gramamoneda, to make people aware the project had entered a next stage.

– A new space for information and unique access to user accounts.
No longer was this attached to the municipal website. The new website allowed the development of a design, structure, and functionalities that made information easier accessible. The space contained information such as the regulatory documentation; the regulations and the studies and analysis on its evolution; the visualization of the composition of the social and business network and the inclusion of news and information exclusively related to the project.

– Implementing of a centralized method for detecting incidents, opinions and complaints.
The establishment of a personalized immediate response method and the assignment of people from the technical team as reference assistants for each user raised the overall level of confidence in the project. This step was later instrumental in the development of the principle of earned vs. captured data.

– Eliminating inactive, stalled, or non-committal accounts through agreements with account holders.
It was a matter of isolating problems and establishing an atmosphere of hope and usefulness, giving the most dynamic users a leading role in the use of the currency. The intervention plan consisted of contacting all users through face-to-face visits, taking the pulse of the state of the system, and especially approaching the concerns, doubts, and needs of the users. Indirectly, these actions positioned the technical office team as the proximity referent required by the project. By the end of 2020, 262 inactive accounts had been removed from the system and, at the same time, the team had managed to give the circuit a new energy. The principles of appropriate environment, voluntariness, and intrinsic motivation guided these actions, and the perception of the project, in view of the results, improved.

Data for the period 2016-2022

The impact of the COVID pandemic should not be underestimated when analyzing the information. Much of the final years of the project took place during this period. The following tables show more than interesting results during the pandemic.

	Cashflow (€)			
	Cash-in	Cash-out	Fees	Balance
2016	6,750.00	-		6,750.00
2017	129,883.00	6,395.19	264.24	129,973.57
2018	280,956.37	65,300.07	2,104.78	343,525.09
2019	73,929.75	154,371.28	1,254.74	261,828.82
2020	255,801.74	158,162.90	414.61	359,053.05
2021	268,064.83	239,617.95	1,164.08	386,335.85
2022	375,231.10	221,969.52	1,384.54	538,212.89

- **Cash-in:** Transfers of euros that the municipality contributes to the system, converted into Gramas from its current budget.
- **Cash-out:** Transfers in Gramas that users of the system request the municipality to convert into euros.
- **Fees:** Levy on cash-out of the amount converted into euros, corresponding to taxes on cash-in: transfers in euros that the municipality contributes to the system, converted into Gramas from its current budget.
- **Balance:** Balance of the accounts of all users of the circuit at the end of each year.

Due to the growing number of participants, it got easier to spend. At the end of the first quarter of 2023, 673 out of a total of 1,748 companies in the city had joined the circuit resulting in an increase of number of transactions and turnover within the network.

In Santa Coloma, anyone who request an exchange of the local euro to a regular euro account during the first 45 days must pay a 5% surcharge. The amount going down this route is quite low compared to the amount of money in circulation, as can be seen in the next table which shows the returns of that 5%.

Income from fees (€)	
2016	0.00
2017	324.77
2018	1,641.56
2019	1,146.48
2020	479.61
2021	1,144.08
2022	1,404.54
TOTAL	**6,141.04**

COVID 19 and the Grama

The COVID 19 pandemic in early 2020 greatly affected the socio-economic fabric. Nevertheless, the local currency project was strengthened. With the streets deserted due to the strict confinement, the technical office of the currency revealed itself as the main reference of local economic activity for the small local establishments that due to this situation could not operate as usual and, even less, compete with the booming web-shops. The technical team took on the challenge of turning this reality into an opportunity and through intense communication and support to users. The office became an attractive meeting place for local supply and demand. The lines of intervention focused on:

- **Detecting users' needs by applying the idea of deserved data through personalized audio, video and text contacts and performing continuous monitoring of system evaluation of incidents (captured data).**

- **Build a sense of community through intensive proactive communication actions involving user participation. Its integration to the social networks of the currency of Santa Coloma, especially Instagram and Twitter generated additional dynamism. Weekly, a newsletter was sent in a segmented and personalized way according to the typology of user to whom the information was addressed. Topics included among others visualization of the supply of products, services and knowledge of the companies in the network; data on the evolution of the currency; success stories of the use of the currency explained in audiovisual format by the users themselves and explanations on the construction of value chains and clusters of local activity such as for example electricians, carpenters, painters, masons, etc.**

By the end of 2020, more than 12,000 transactions had taken place and more than 1,200,000 Gramas had been recirculated among the companies in the circuit. The balance of 360,000 Gramas and a multiplier of 3.65 were clear indicators that the currency was in good health. The following year, 2021, the severe affectation of this pandemic on local establishments still persisted, the circuit resisted the onslaught and prevented public money from leaving the town too soon.

The city ensured that a growing part of the expenditures of the city council was spent through the booster. In particular. Initially, in the year 2022, the first 150,510 euros were transferred that were focused on aid and contributions to vulnerable people or people at risk of social exclusion. The remarkable results and the potency to extend the volume promise enormous future prospects for the circuit. This also allowed the incorporation of 339 individuals into the system.

Characteristics of the participants

The heart of the Social Trade Circuit (CTS) of Santa Coloma de Gramenet consists of economic transactions between companies (B2B). In addition, the circuit is enriched by the participation of individuals and, in a very special way, of organizations and entities of the local associative fabric.

The relations between participating actors directly influence the circulation of the local euros, the vitality of the system itself and its proper functioning.

Parameters such as the circulation rate, quantity, origin or destination of local payments are largely linked to aspects such as the number, size, diversity, sector or location of members.

Since its inception in 2016, the CTS has had three types of users. As of September 2022, a new group was added: special social assistance recipients.

- **Companies**
- **Individuals**
- **Entities**
- **Recipients of social assistance**

The evolution of the different typologies and the number of users over the years is shown in figure 12.2.

Summary

The results of the first ten years of the STC in Santa Coloma de Gramenet show that the impact of public funds can be optimized. The impact of that part of the city government's budget has increased from 1.85 to 5.85 in six years. This means that the local economy has benefited from the advantages of the local payment circuit. This increase in the value of the local multiplier indicates that individuals or organizations are increasingly reinvesting the

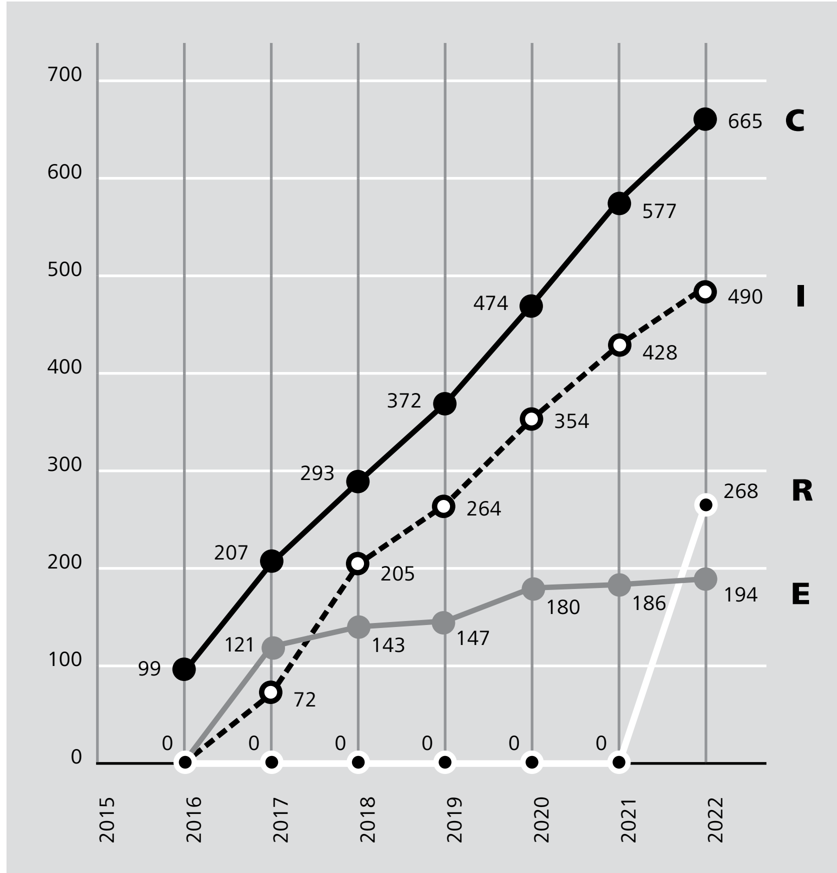


Figure 12.2
Number of users of the different typologies 2016-2022.

C = Companies
I = Individuals
E = Entities
R = Recipients of social assistance

money received in the local economy. The introduction of the local currency has stimulated consumption and investment within the municipality, which has contributed to stimulating the economy and social cohesion. The overall volume is still little compared to economic parameters, but since the system now has the potency to be extended to also gain impact in absolute numbers.

Santa Coloma's experience shows that making part of the euros issued by the government local also has social and environmental impacts. In addition, the circulation of money has improved. This has had an effect on the habits of local businesses and entities. The increase in the flow of money within the municipality has contributed to the dynamization of the local economy. It is likely that this has had a positive effect on employment and the quality of life of local residents.

The project and its study were possible thanks to the involvement of the city government stimulated by the European initiative Digipay4Growth (2014-2016) project. The project's technical office facilitated the consolidation of the project.

The first amount of € 6,750 that the city government transferred to the circuit in the form of local currency was transferred on December 28, 2016. From this date until the end of 2022, it transferred a total of € 1,390,616.79. At the end of the first quarter of 2023, there were 673 companies registered out of a total of 1,748 in the city.

Cash-in	€ 1,390,616
Transactions	79,009
Turnover	€ 6,364,070
Cash-out	€ 845,816
Fees	€ 6,586
Saldo	€ 538,212
Multiplier	5,85

The direct economic impact of these transfers was € 6,364,070.95, generated by 79,009 transactions carried out by users during this period. The indirect impact such as the retention and consolidation of jobs, the strengthening of local businesses and the improvement of the sense of local identity and belonging, as well as the contributions to the environment due to the increased importance of the local economy have not been researched.

Briefly, and only from an economic point of view, the synthetic summary of the impact of the local currency in Santa Coloma is that before the appearance of the local currency, in Santa Coloma, out of every 10 euros that the city government awarded in grants, only 2.91 remained in the city, while in the year 2022, out of every 10 that were awarded, 9.02 remained in the city.

As mentioned, the Santa Coloma City Council wanted research to deliver data on impact of this tool through evidence and comparisons over time, starting from before the local currency was put into circulation, and analyzing and evaluating results on an ongoing basis. The data (provided in this chapter) hopefully can be useful for other cities and communities that want to adopt a local Social Trade Circuit.

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Call for support

The innovation of dedicated accounts using time tracker, negative interest, the Bonus, etc has a very promising application in various situations.

Used to improve the multiplier/impact of remittances it could potentially reduce the poverty of hundreds of millions of people. The impact of governmental transfers from rich regions to poor regions could be given far more impact. This is important for many countries, such as Brazil, South Africa, and the USA, but also for the transfers from the EU to the weaker regions within the Union.

Another field where the impact of available funding could be improved a lot are the investments made to prevent migration and to help former fugitives to establish a business in their countries of origin.

All these situations could benefit of the Booster approach. STRO however does not have the relations, the money or the people to develop these opportunities. Hence this call for support. To researchers who could help in the preparation of projects and can help to evaluate the opportunities. To private organizations such as Oxfam, and international ones, such as the WorldBank and UNDP. Clearly an ethical investor or a philanthropist could make a lot of impact here.

On the URL *https://www.socialtrade.nl/english/publications* you will not only find attachments and comments on this book but also find updates on the planning (and hopefully soon the execution) of such initiatives.

Thanks for reading: the field is yours!