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HOW COULD BLOCKCHAIN BE A KEY RESOURCE IN THE VALUE CREATION PROCESS OF A LOCAL CURRENCY? A CASE STUDY CENTERED ON EUSKO

Fabienne Pinos*

** IUT de Bayonne et du Pays Basque, Université de Pau et des Pays de l'Adour, Bayonne, France*
fabienne.pinos@univ-pau.fr

ABSTRACT

Blockchain is seen as a major financial innovation for the years to come; it interests financial industry as well as some local currencies. Thus, it seems appropriate to analyze how Blockchain could be a key resource in the value creation process of a local currency.

Our article aims first to analyze the potential contributions of Blockchain for local currencies. Then, we compare these contributions to the key resources and activities identified in the study of the value creation process of Eusko, the first European currency in circulation since the end of 2018. Launched in June 2011, managed by the association Euskal Moneta (EM), this initiative aims at creating value that can be considered as public value (Moore, 1995). We use the canvas of Osterwalder & al. (2011) to identify the key resources and activities of EM's business model and explore how blockchain technology might or might not support them.

We show that several factors can slow or even preclude the adoption of such a technology in an innovative context that solicits, in various forms, the adaptive capacities of project stakeholders. Through this case study, we wish to contribute to develop knowledge about economic models of local currencies.

KEYWORDS

Local currency, blockchain, value creation, trust, transition.

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1. INTRODUCTION

Blockchain generates strong interest from financial institutions. In parallel with some individual initiatives, focused on the development of innovation laboratories (Barclays, BBVA, UBS...), collective projects such as R3 CEV created in 2014, or more recently Komgo SA in 2018, have been launched. The financial industry does not hide the fact that it expects this new technology to provide greater security, lower costs and better control of error risks.

However, literature shows fundamental opposition in the motivations behind the creation of virtual versus local currencies (Dupré, Servet and Ponsot, 2015; Fourel, Magnen and Meunier, 2015). Yet, both participate in economic exchanges and aim to form communities. It also appears that the technologies underlying current virtual currencies could be used for other purposes than purely commercial or speculative ones (Lee, 2015; Gladden, 2015). For example, the opensource ComChain software launched at the end of 2017 and developed by Monnaie Léman , is based on a blockchain technology and designed to serve a local currency.

In a context where financial intermediaries see this technology as a major innovation for the coming years, where some local currencies are also interested in, it seems appropriate to try to analyze how Blockchain could constitute a key resource in the process of value creation for a local currency.

The first part of this paper aims to examine the potential contributions of this new technology for local currencies. We will rely here on a literature review (Nakamoto, 2008; Greenspan, 2015; Suichies, 2015) and on the innovative example of the e-leman from Monnaie Léman[1]. In the second part, we will compare these contributions to the key resources and activities identified in the study of the value creation process of the Eusko, the first European currency in volume since the end of 2018.

Launched in June 2011 by the volunteers of the non-profit organization Euskal Moneta (EM), the objectives of the Eusko are multiple and ambitious: "relocation of the economy, protection and promotion of the Basque language, strengthening of ecological and solidarity practices and social cohesion". Anchored in a geographical and cultural territory with a strong "civic capital" (Itçaina, 2010), designed and created by the non-profit local sector, this initiative encourages new forms of cooperation for the benefit of societal causes and aims to create value that can be described as public (Moore, 1995). We use the matrix of Osterwalder & al. (2015), focused on value creation, to identify the key resources and activities of EM's economic model and study how a blockchain technology might or might not support them.

We show that, despite certain advantages, several factors can hinder or even exclude the adoption of such a technology in a context of innovation that requires, in various forms, the adaptability of the project stakeholders. Through this case study, we wish to contribute to develop knowledge about economic models of local currencies.

Methodology

A documentary analysis (content of websites www.euskalmoneta.org, http://monnaie-leman.org, https://www.poi.app, https://www.impak.eco/fr/, press articles, interviews with elected officials, etc.), interviews and working sessions with Dante Edme-Sanjurjo, General Manager of Euskal Moneta, provided the necessary materials to formalize EM's Business Model and analyze its positioning with regard to digital solutions. This exploratory work is part of a larger collective study on local currencies in Nouvelle Aquitaine (MoLoNA, 2018-2020) that began in late 2018, driven by the Maison des Sciences de l'Homme d'Aquitaine and funded by the Région Nouvelle-Aquitaine.

2. THE POTENTIAL CONTRIBUTIONS OF THE BLOCKCHAIN FOR LOCAL CURRENCIES

2.1. Literature review

What are local currencies wishes and objectives?

The purpose of local currencies, also known as "social" currencies, is "to promote different exchange and even production practices with the aim of social and sometimes political transformation." (Blanc and Fare, 2012). They do not aspire to replace the existing monetary system but propose to address some of its weaknesses. The motivations

behind local currencies are multiple. On the one hand, there's the question of combining short circuits and responsible consumption in order to generate local economic development as well as human and social development. On the other hand, there's the question of promoting monetary diversity in order to strengthen the sustainability of the global monetary system (Lietaer, 2009).

For Blanc (2018), complementary local currencies (CLCs) pursue three complementary and interdependent purposes:

- Socio-economic goals or in others words: "the aspiration to redefine what wealth is and what goes against it",
- Purposes of monetary contestation in opposition to the sovereignty of the monetary institution and the "delegation of management to a hierarchical banking system that issues money by interest-bearing credit",
- Aims of community construction, as an objective in itself and as a "way to achieve the previous aims".

The CLCs are thus part of three critical mindsets: anti-capitalist, anti-banking system (distrust) and pro-decentralization.

They are a vector of social belonging (Théret, 2007) as they carry within them another convention of exchange relationships, "another cognitive and ethical framework" (Gadrey, Jany-Catrice 2016).

For their members, they are therefore full of promises in both short and medium terms. In the short term, they allow inclusion in a group and offer open support and opportunity to those who wish to take concrete action for societal change. No one is excluded from this simple and accessible means of action. In a longer term, they promise or hope for a socio-economic impact towards a more sustainable and inclusive societal organization. As a tool or service, the value proposition of an CLC is embodied in three dimensions: a feeling of belonging, empowerment and societal transformation.

What are the main obstacles to achieving this today?

The French Economic and Social and Environmental Council notes that "the creation of these new currencies often takes place during periods of geopolitical (conflicts, wars) or economic crisis in order to meet unsatisfied or poorly met user needs" (ESEC, 2015). According to the definition of social innovation given by the High Council of the Social and Solidarity Economy (HCSSE), these currencies are part of these innovative processes.

« Social innovation is the development of new responses to new or poorly met social needs under current conditions of market and social policy, involving the participation and cooperation of relevant actors, including users. These innovations concern both the product or service, as well as the modes of organization, distribution, [...]. They go through a process of several steps: emergence, experimentation, dissemination, evaluation. » (HCSSE, 2011)

However, as social innovations, many French CLCs struggle to overcome the emergence/experimentation phases. The initiatives are abundant. At the end of 2016, it was possible to count more than 54 local currencies in the pipeline, in use or having been used (Blanc et Fare, 2018). However, users are still few in number. With more than one million units in circulation at the beginning of 2019, Eusko is the most important local currency in Europe. However, it still has only 3200 individual members and 912 professionals, including 688 companies. The population of the Basque Country includes about 142,000 households and nearly 47,000 companies (Basque Country Economic Observatory, 2017). If we consider one member per household, in less than 7 years, Eusko has reached 1.8% of the population and 1.5% of the companies.

In concrete terms, the economic model of scale change, and sometimes even simple sustainability, is difficult to define and implement.

Non-profit associations must nevertheless gather human and financial resources to maintain and/or develop the use of their CLC. Many face the difficulty of designing a sustainable economic model to cope with volunteer exhaustion, grant volatility, complex funding of operational costs, in the absence of sufficiently remunerative activities.

To maintain the motivation of volunteers, recruit members, obtain public support, these organizations also face the problem of proof: how can they demonstrate the territorial impacts of the circulation and use of a CLC?

Despite the difficulties in assessing their impacts and the uncertainty about the evolution scenarios over the next few years (Blanc, 2018), some positive effects on the local economy have been demonstrated (Lietaer, 2009; Ruddick, 2011; Fare, 2016). But the equation is complex in reality because to produce visible or measurable effects, the number of transactions in local currency must be significant. The number of users and the speed of circulation of the currency are key elements of impact production. To succeed, it would be a matter of entering a virtuous circle in which money circulates in satisfactory quantity and speed to produce measurable impacts, highlighting these impacts to recruit new members, obtain subsidies, etc. However, reaching a significant threshold of transactions requires an initial cost that few organizations can afford.

In this context, digital deployment is not only a major challenge for CLCs (Martins, 2018) in order to facilitate their dissemination, increase their speed of circulation, evaluate the activity but also a challenge due to the human and financial needs involved. Several technical choices are available to CLCs. We question below the potential benefits of blockchain technology for the digitization of a CLC.

Objectives and potential of Blockchain

In the founding article on Bitcoin and Blockchain, its technological support, it was first and foremost a question of offering users an alternative to traditional financial systems by ensuring secure and disintermediated transactions. Indeed, the financialization of the economy and the development of Internet commerce seemed to give financial institutions the status of trusted third parties that seemingly cannot be bypassed. The impossibility of ensuring the irreversibility of digital financial transactions and the risk of double spending apparently gave these institutions an essential economic function. In contrast to this form of monopoly, Blockchain, when it was created, proposed a peer-to-peer system, capable of generating proof of calculations certifying the chronological order of transactions - and thus solving the problem of double spending - while avoiding the mediation costs charged by financial institutions (Nakamoto, 2008). Thus, one of the stated aims of the project was to bypass mediation costs that increase transaction costs, particularly for low-value exchanges. An *a priori* goal in favour of improving the accessibility of financial services. In this respect, the blockchain technology was in line with the critical positions of the CLCs regarding anti-banking system and decentralization.

With regard to Bitcoin, these objectives do not seem to have stood the test of time. Mike Hearn, pioneer of the program, denounced in 2016 a system controlled by a few people, a saturated network capacity, more expensive transactions than if they had been generated with a credit card.

On the other hand, the underlying blockchain technology has opened up other perspectives such as the use of work evidence to achieve actions that are useful to society. Like Bitcoin, Curecoin uses the SHA256 algorithm but, unlike the first, the computing power of the network is used for research against cancer, Alzheimer's disease or Parkinson's disease as part of the Folding@home program. Minors are paid on the basis of their contribution to the calculations necessary for this research (Lee, 2015).

In addition, the hypothesis of the design of intelligent crypto-currencies, capable of self-regulating their use in accordance with ethical principles, has also been studied (Gladden, 2015). This is essentially based on the progress already made and still to come in the field of artificial intelligence. As a result, it can only be confirmed or invalidated in the light of future technological developments.

The technologies underlying current virtual currencies can therefore be used for purposes other than purely commercial or speculative. Gideon Greenspan (2015) specifies the contexts - blue lines in the figure below - in which a blockchain has added value:

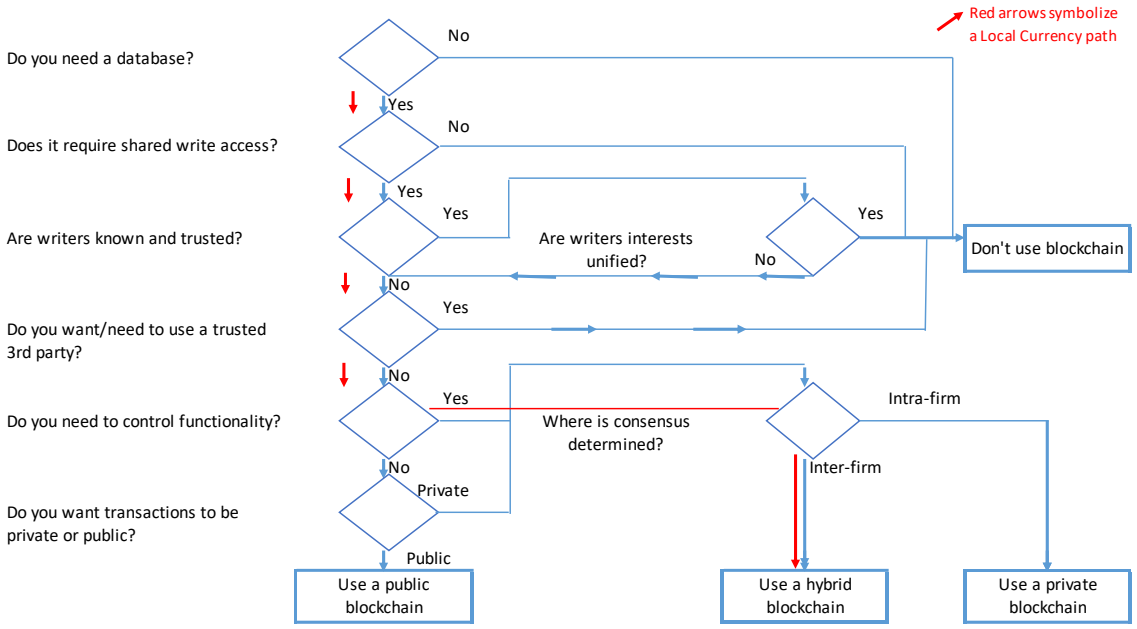

Figure 1: Contexts conducive to the creation of added value through the use of a blockchain.

Source: Author based on Greenspan (2015) and Suichies (2015).

The red arrows symbolize the context of a CLC type virtual currency: a database is required to record transactions, the latter are generated by users who do not know each other, without a trusted third party intermediary but the participants, individuals and/or companies, wish to control the functionalities of the system that manages the transactions. The diagram above suggests a hybrid blockchain, which would avoid the concentration of power currently observed on Bitcoin. This support seems to have several advantages for the development of a complementary local currency.

First, the hybrid nature makes it possible to establish a governance committee and organize transactions according to democratically established rules. It covers the risk of oligarchy seen in Bitcoin and responds to the participatory ambitions of local currencies. For example, the control of functionalities can avoid the obstacles linked to anonymity: transactions can appear with a reference in the general ledger and the governance committee can maintain a correspondence file between the reference and the legal entity or natural person. It can also automate conditions for the loss of value of currency over time (melting currency) without a time-consuming and potentially error-prone manual process, as well as define in advance the rules for conversion into national currency.

The public nature of the transactions can improve confidence in the local currency, from the project participants as well as from the institutions. The risk of fraud (forgery) is limited, the popularity of the currency is easily assessed by users thanks to the transparency on the number of exchanges and the amounts exchanged, the risks of being "assimilated to the underground economy" (ESEC, 2015) are also reduced because of this transparency. The general ledger can facilitate the control of compliance with social security and tax obligations as well as the correct application of the regulations.

Finally, any participant can become a *de facto* volunteer, by using the computing power of his computer to serve the network. While a CLC can quickly blow out a small group of volunteers, automation of tasks and collective investment can significantly reduce this barrier.

A potential disadvantage is the virtualization of transactions. According to the ESEC (2015), "placing the IT tool at the center of the system makes it impossible to build social links between individuals". However, the success of social networks seems to indicate the opposite and the fact that transactions are dematerialized does not imply the absence of physical contact between network participants. Computerization, virtualization does not always mean deterritorialization. It opens up opportunities, for sectors from which the players may be geographically distant, for

traders who will not have to invest in any specific equipment or account management, without opposing local relationships or feeling of community belonging.

A second point of vigilance concerns the energy costs induced by virtualization. Such a system should be subject to an impact measure in order to remain consistent with the ecological transition ambition of users of local currencies.

Therefore, from a theoretical point of view, the virtualization of complementary local currencies seems to provide solutions that are favourable to their development. However, these benefits can only be confirmed once they have been put into practice. Technically, the hybrid blockchain that could be used would have to guarantee safety, reliability and fluidity to users, at a sustainable cost, without losing the societal values inherent to the project. On all these points, it must be comparable with other tools allowing a digital switchover for a local currency.

2.2. From theory to practice, some examples of use (e-leman, impakCoin, Poi)

Le Léman is a local French-Swiss currency. Launched in Geneva in September 2015, it aims to promote socially and ecologically responsible economic practices in the Lake Geneva cross-border living area. At mid-2019, it has about 1600 individual members and 550 businesses or companies' members. It has a dual specificity: first, it is both local and cross-border, secondly, it exists as a cryptocurrency since 2017 but has maintained as well its paper notes form. Initially developed for its own account, the open source software ComChain from Monnaie Léman is based on a blockchain technology. The blockchain application of Monnaie Léman allows both the issuance of currency guaranteed by an official currency stock and mutual credit between companies based on the Swiss WIR and Sardinian Sardex models. The advantages highlighted are a stronger security of transactions, a more democratic and transparent process, and greater independence due to the use of free software. Other functionalities are considered (Bosqué, 2017). The first is to integrate a time credit unit that would enhance the value of volunteering. The second considers the blockchain support as a tool for measuring the impact (social, ecological, economic) of the transactions recorded. Finally, this tool would be a technical solution for the development of participatory impact investments, i.e. projects whose social, economic and ecological impacts would be measured. All these functionalities correspond to the ambitions of local currencies and seem to provide technical solutions in line with the economic sustainability and scale change issues they face.

The dissemination of ComChain is non-profit, i.e. the expected remuneration depends on the actual costs of the work performed. The software was thus proposed to other local currencies, with two priced offers that were intended to be adapted to local currencies: a basic offer at €5,000 excluding VAT per year and a "turnkey" offer with a price that varies according to the number of members. These offers were available in 2017 but it should be noted that this pricing has been removed from the website and no longer appears in 2019.

Comchain "turnkey" offer 2017: "For CLCs or companies that prefer to delegate the entire service and its operation to Comchain, a rate per month and per member is proposed:"

Professionals			Individuals members		
From 1 to 200	From 201 to 500	From 501	From 1 to 500	From 501 to 1000	From 1001
40 €	30 €	20 €	4 €	3 €	2 €

Source : Monnaie Léman website, 2017.

Applied to the Eusko currency, this pricing proposed in 2017 is in reality unsustainable for an CLC:

688 companies x 20 € / month = 13760 € / month

and, 3200 individuals x 2€ / month = 6400 € / month

In addition, "the blockchain solution developed by Monnaie Léman requires a strong mobilization of technical skills of IT specialists to secure the system and these resources are not always present internally" (Martin, 2018). Finally, from an organizational point of view, the "efforts of pedagogy, collective experimentation, and sometimes reminders" needed to implement such a solution are generally poorly anticipated by project leaders (Le Crosnier and Vidal, 2017).

In France, Tera[2] project declared is interest in Comchain solution in 2017 but finally adopted the Abeille, a CLC whose digital form is supported by Cylaos ICT, a non-blockchain software.

In parallel with Monnaie Léman, two initiatives deserve to be mentioned to further explore the potential of using a blockchain technology for a CLC. The first, developed by Impak Finance, was born in Canada in 2017. The Impak Coin is defined as "the first stable crypto-currency, designed to support the growth of the impact economy by promoting loyalty, rewarding collaboration and encouraging responsible purchasing from qualified members of the Impak platform"[3]. For its promoters, the Impak Coin combines "the advantages and functionalities of complementary currencies, reward programs and new decentralized virtual currencies." In practice, it is an application that allows you to buy products and services from companies selected on the basis of social responsibility, to pay peer-to-peer, to invest in projects deemed to have positive impact on society, to be rewarded in Impak Coins for a socially and ecologically responsible behaviour. Transactions are free for the user, the security and energy efficiency of the system are highlighted as Impak Finance's strengths. However, the economic model of the structure has not been demonstrated since it accumulated a deficit of approximately C$3.7 million, or nearly €2.6 million, between April 2016 and April 2018[4]. In France, a similar initiative was launched in 2018 with the objective of "building on the blockchain to develop the use of the various complementary currencies already in existence and reward individual behaviour that promotes the resilience of the territory"[5]. This initiative named POI defined itself as "a decentralized ecosystem that measures and values positive behaviours, whatever they may be, in order to bring the impact economy into a new era". In practice, POI is both the name of an application and the unit of impact measurement it evaluates. The system suggests services, previously selected on the basis of social and environmental impact criteria. Each use of selected services produces "Poi" that can be exchanged in local currency or donated to local projects. This service is presented as a reliable tool for digitizing local currencies. One year after its launch, the application's presentation website appears dormant, no data is available on the number of users or the current status of the tool. The list of service providers is not available online. When asked, the site managers said that this information would be put online in September-October 2019.

This theoretical and practical short inventory makes it possible to summarize below the main potential advantages and disadvantages of using a blockchain technology for a CLC today.

Advantages	Disadvantages
Democratically established rules, Improved confidence, Transactions security, Multi-functional support: - guaranteed currency and mutual credit, - value of volunteering, - impact measurement tool, - participatory investment platform	High entry costs for project leaders: - costs in assets (material investment), - human costs of supporting change both in terms of internal organization and with regard to users No evidence of the sustainability of the emerging solutions, unbalanced Business Models at time

If the disadvantages identified are real, it should be noted that the listed advantages remain potential as long as no CLC has empirically demonstrated them all. At this stage, our observations highlight rather a slow implementation, a low transparency of the models under test and a non-provided proof of their entire technical efficiency.

In this context, it seems to us enlightening to compare, in the second part, the arguments put forward by the defenders of blockchain support with the positioning of Euskal Moneta, manager of Eusko, the leading European local currency.

3. KEY RESOURCES AND KEY ACTIVITIES IN THE VALUE CREATION PROCESS OF EUSKAL MONETA

3.1. An objective of creating public value

Among the many local currency projects initiated in Europe, Eusko became the leading european currency regarding the number of units in circulation at the end of 2018. Conceived in June 2011 by volunteers from the current Euskal Moneta (EM) non-profit organization, based in a geographical and cultural area with strong "civic capital" (Itçaina, 2010)[6], this initiative aims to establish new forms of cooperation in the service of societal causes. Its currency was launched on the January 31st, 2013. In nearly eight years, the cooperation generated has been observed between various economic agents: individuals, professionals, associations but also public institutions.

Moore (1995) argues that private companies create private value for the benefit of their owners, while public organizations generate public value, one component of which can be assimilated to general interest, for the benefit of citizens and other stakeholders. Coming from a citizen collective, EM shows in its statutes its vocation to create public value.

According to the documentary study and interviews conducted, it appears that the diffusion of the Eusko, in paper or digital form, aims to the creation of public value at various scales: individual, collective/community, societal. Value propositions take different forms depending on the stakeholders involved.

- For individual members, the use of Eusko guarantees that each act of purchase is a civic act in accordance with its values and convictions. It allows members not only to show which model of society they wish to pursue but also to contribute to transforming society towards this model closer to their values. The user votes for a societal orientation and puts into practice an action that simultaneously contributes to it. It is therefore possible to consider that for the user, the value proposition of EM is a capacity for expression and action, an "empowerment", in favour of a societal model in accordance with his convictions.

- For the recruited companies, the acceptance of Eusko as a means of payment contributes to their positioning. Listed in the EM online directory, identified by a specific display at the point of sale, these service providers show that they correspond to the selection criteria defined by EM and that they are committed to meeting challenges such as integrating local suppliers and/or improving the recovery of their waste. Private structures that accept Eusko subscribe to new organizational constraints: monitoring of specific receipts and accounting, recruitment of new suppliers, membership fees, conversion fees[7], etc. In return for these obligations, these organizations have a differentiation tool to better exist in their respective markets. EM's value proposition to these users would be, as a label or certification would do, a means of demonstrating compliance with criteria valued by their own customers.

- For associations / non-profit organizations, the use of Eusko also promises a way to promote a societal orientation in accordance with their values. They can also expect to benefit from donations from EM resources. By accepting to pay and be paid in euskos, theses associations gain new visibility, enter a community, strengthen their networks and the dissemination capacity of their social object. This network also appears as a springboard for EM, each association being a potential relay for recruiting new members.

- For local authorities or public services, membership of EM offers an opportunity to show solidarity with, and concretely participate to, an initiative that aims at a collective territorialized benefit.

Thus, the value propositions formulated by EM can meet various expectations depending on their target while converging towards a common objective, the social purpose of EM. In accordance with the Canvas strategic analysis model (Osterwalder and Pigneur, 2011), to implement these value propositions and produce public value, EM must rely on key resources and key activities without which the association could not continue.

3.2. Euskal Moneta's key activities and resources

Key activities

For Dante Edme-Sanjurjo, EM's Managing Director, the organization must first and foremost master the processes of issuing and making money available for users, both in its paper version and in its digital version. Indeed, EM's strategy is based on both supports in accordance with its founding philosophy of openness and inclusion. To date, since the creation of the digital eusko in 2017, the quantity of paper banknotes in circulation has remained stable. In this respect, the Eusko has followed the same trajectory as the Chiemgauer when it launched its digital tool. For the EM Steering Committee, this demonstrates the need to offer the two means of payment to members and to make them easy to use, similar to traditional means of payment, so that there is « no other obstacle for people than to want to commit themselves ».

Secondly, there is the solicitation of professionals, or "acceptors", so that they grow in number but also in the variety of products and services offered. EM also needs to recruit people to set up local networks so that BtoC acceptors can find ways to use their euskos in BtoB transactions.

Also spontaneously mentioned were communication with individuals and all the actions aimed at facilitating the use of euskos: "making the tool accessible, pleasant and practical".

Other activities such as seeking subsidies or human resources management were also mentioned later, demonstrating the many challenges to be overcome to ensure the sustainability of the structure. We will focus here more particularly on the four spontaneously judged critical.

Partners and key resources

In order to sustain these essential activities, EM must be able to rely on key partners and resources.

Thus, to recruit volunteers and members, to communicate with individual users, EM has relied since its creation on non-profit organizations historically positioned in the defence of territorial values and already recognized for their actions. From the very beginning, it was a question of gradually building trust and legitimacy. Here, trust has been based on shared values, pedagogy and interpersonal relationships, regardless of any technology. This empirical observation is consistent with the results of Manas and Bosc-Haddad (2017) for whom "technological solutionism, which would like to establish trust by algorithms, without social or legal anchoring, is illusory. »

The legitimacy of EM, for its part, comes from all stakeholders. However, at the local level, public authorities have been able to strengthen this legitimacy by supporting the associative initiative that they help to institutionalize. Public partnership has also proved to be financially unavoidable.

With regard to the key activity "issuing and putting into circulation paper euskos", EM benefits from the commitment of retailers who act as exchange offices. Volunteers also prepare and securely transport these physical funds. With regard to dematerialized euskos, the skills needed to design and maintain a high-performance IT system as well as the skills needed to control operations proved to be central.

Thus, in terms of resources, the activity could not continue without the human skills dedicated to managing and animating the network, nor a computer system that ensures the follow-up and security of transactions. While some of the IT tools are open source, data security remains a sensitive issue in an area where trust is fundamental.

We note that when launching a CLC such as Eusko as well as in its current development phase, the key resources are essentially human: ability to create links between people, time made available and given to the project, technical skills. Without major technological innovation, EM has demonstrated a high degree of autonomy in its ability to conceptualize an alternative to the dominant system and to unite people and organizations around values already anchored in the Basque non-profit network.

The switchover to digital and therefore IT support undoubtedly supported the key activity of facilitating the use of euskos, but among the solutions proposed the blockchain technology, despite the advantages highlighted above,

was quickly discarded. Indeed, in the opinion of the Steering Committee, it had no specific advantage in favour of the value creation process implemented by EM.

3.3. Reactivity, support and confidence, major assets of the Eusko

"For the digital switchover, we needed a fast and effective solution". As early as 2015, EM is looking into the different technologies available. The blockchain solution was then only emerging and its reliability too little demonstrated to be seriously studied. Very quickly, and unanimously among the Steering Committee, 100% mobile systems were also rejected, because they were considered too selective, as were INGENICO terminals, which would have associated EM with banking circuits. EM decided moving towards investing in a proprietary electronic payment terminal circuit, a more expensive solution but more in line with its concern for responsiveness, efficiency and autonomy. This decision was validated by the entire governance circuit: the various technical options were proposed to the Committee of Colleges[8], then to the General Assembly, which validated the options adopted by the Steering Committee.

The Euskocart was launched in 2017 and fulfils its mission of facilitating the use of currency for members.

While banks and fintechs are developing mobile payment solutions to improve the user experience, EM remains pragmatic, considering that the appropriation rate of this payment method is still too low to consider a new investment.

To develop, EM choices remain attentive to slow and progressive changes in users' behaviour and favour operational capabilities, visibility and transparency. The Steering Committee members need to feel full trust in EM's tools, and they see their own trust as a condition so that users broadly share this trust. Among the forms of trust identified by Aglietta and Orléan (1998) - methodical or mimetic, hierarchical because based on collective power, and ethical - EM focuses primarily on this ethical dimension. Here, questioning a dominant value system brings individuals together to form a collective, a community.

Nevertheless, for EM, the desire to change scale stems from the conviction that it is necessary to "move away from a purely protester and militant logic", "to integrate the greatest number" to move towards real societal change. The march is already high to massively redirect consumption behaviors towards a relocated economy, so it is a matter of facilitating the transition with operational tools already anchored in the habits of the majority of users. EM thus seems to adopt a strategy of small steps, focused on the realization of its value propositions, continuously adapting to the needs, even to the habits, of users, without imposing a major technological revolution on a public not very familiar with the Blockchain, still too often negatively assimilated to the Bitcoin.

Thus, the potential benefits of a blockchain technology, as identified in the first part, do not present any added value to date for the first European local currency.

Here, for the moment, neither the establishment of democratic rules nor the improvement of trust requires a technical solution. On the contrary, the human relationship is privileged. Transaction security is based on an already old technology that requires human controls, but it seems more controllable in view of the skills available at EM. There remains the multi-functionality promised by the blockchain. The valuation of volunteering and the measurement of the impact of the Eusko are among EM's future projects. At this stage, the available tools have not yet been studied by the Steering Committee, but the latter will remain faithful to its guiding principles: responsiveness, support for users and trust. For Dante Edme-Sanjurjo, "the advantage of the blockchain would really have to be very significant for us to decide to spend time changing our current system".

4. CONCLUSION

While the financial sphere, traditional financial institutions as well as Fintechs, but also governments are strongly studying the potentialities of blockchain technology, it remains far removed from the concerns of the first European CLC.

Despite the advantages put forward by the financial industry and by some precursors inside the social economy (e-léman, impakcoin, POI), the empirical study conducted with Euskal Moneta shows that various factors, such as non-

demonstrated reliability or the difficulty of being technically independent, initially excluded the adoption of this technology. The lack of transparency on ongoing experiments and the lack of evidence of competitive advantages on already proven technologies are still obstacles today. In addition, the adoption of a CLC by the consumers is already a matter of accepting an innovation and integrating it into their practices and habits; a change that requires specific attention and time. EM prefers to facilitate this transition by adapting to the technologies already favoured by most people rather than imposing an emerging technology at this stage.

However, blockchain is not ruled out because of a dogmatic posture, EM remains actively vigilant with regard to households' and businesses' behavioural changes in the territory, as well as with regard to positive operational evidence that could be provided by precursors.

Functionalities related to the measurement of the social impact of CLCs could in the future participate in the value creation process by facilitating the identification of the economic and social effects of the use of the Eusko on the territory. Proof of impact could indeed strengthen the association in a virtuous circle and contribute to its vocation of social transformation. Perhaps in a shorter period of time, transactions security, which today requires human controls, will give a new impetus to strategic thinking within EM and will lead to reconsider the option of blockchain technology.

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ENDNOTES

[1] http://monnaie-leman.org, local french-swiss currency

[2] Tera is an experimental project that aims to build an eco-village to relocate 85% of the vital production of its inhabitants, reduce its ecological footprint to less than one planet, enhance this production in local citizen currency, issued via an autonomous income of one euro above the poverty line for each of its inhabitants.

[3] https://www.impak.eco/fr/impak-coin/, consulted on 3/07/2019

[4] https://impak-eco-production.s3.amazonaws.com/static/files/financial_statements.66ed0285f131.pdf, consulted on 3/07/2019

[5] https://usbeketrica.com/article/les-monnaies-alternatives-comme-poi-sont-la-pour-stimuler-l-economie-dans-les-territoires, consulted on 3/07/2019

[6] Itçaina uses these words with reference to Evers : "Social capital is then to be understood both as an indicator of the degree of development of a civic society (constituted both by social and political action) and a way to debate civic commitment with an eye on economic development and governance." (Evers, 2001, p. 299)

[7] In 2019, only 16% of these companies have paid conversion fees, meaning that very few convert back euskos into euros.

[8] The Committee of Colleges is made up of 43 elected members. They represent the subscribers and active members, the local authorities, and also the non-profit organisations that participated in the Monitoring Committee during the process of defining the project for a complementary local currency for the Basque Country.