



Development of a Complementary Currency System: The Czech Position in the International Context

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Abstract

This paper focuses mainly on the analysis of the current situation in the Czech Republic in relation to the possible introduction of a complementary currency system, as well as suggestions to the adaptation of existing complementary currency systems which are already working in the world to the Czech conditions, setting up such a system and possibilities for the development of unique complementary currency system which would have a chance to survive in Czech society.

Keywords: complementary currency, Czech Republic, clustering, time bank.

Introduction

The issue of complementary currency (CC) system is seriously subjected to research at many institutions in the world and it is very wide topic due to considerable number of the types of CC systems, if we include also traditional non-official currencies, barter systems, newer time banks, or Local Exchange & Trading System (LETS). Both from the last two mentioned have same basic elements and ways of their work, but they differ in their aims and also audience to which their "services" are focused on. As for the traditional systems they are still the remnants of the past and they illustrate how goods, services and money exchange looked like in the past, before money itself became the goods. It seems that modern CC systems are reaction on the fact, that even though money remains a claim on real resources, yet in recent times it has evolved from its simple means of exchange function to appearing as a commodity, as an underlying asset in increasingly abstract securities markets (Mouatt, 2010). To keep the exchange medium for the general public and citizens, it seems there is necessary to create a new one keeping only

features of the currency which are required for the exchange.

Most of these systems are focused into social spheres of human life, the exact spheres where common currencies are failing to support needs of their citizens. The sources and literature found on this topic so far are focused almost mostly on such a social features, yet there are more possibilities of development for CC systems beyond. The application on business sphere was not entirely explored yet and from the essence of the CC systems there are promising applications on company clusters environment as well. Also by this time there is not CC system at work in Czech Republic, so there are many opportunities to implement it, but prior to such an implementation, intense research and testing has to be done.

As already mentioned above, this paper is going to focus on initial possibilities to implement or adapt existing practices, as well as suggest the new possibilities to which direction CC system should be developed in the Czech Republic. The topic of CC system is very wide to research due

to different understanding of the issue in each country. This paper has following structure. At first we are going to explore brief history, short typology, the ways of understanding of CC systems in the world. Consequently, selected IT issues are depicted. Then, suggestions for possible application on company cluster environment are outlined. The final part of the paper is focused on discovering the ways how to implement CC system in Czech Republic, followed by part where the results are discussed.

Complementary Currency Systems Review

In many countries there are time banks and LETS systems already up and running for many years and various sources are dividing in real number of the functioning ones. They have many similarities in the essence, but they are often understood differently and also adapted to the current needs and cultural differences. This adaptation gives them opportunity to survive. In that case there is no difference between CC system and ordinary business, as both needs to care about their customer's needs and fit into the cultural context. In following lines we are going through brief history of complementary currency systems, main differences between them, description how they work in respective countries including few statistics, where they are available, IT support for CC and possible applications within the company clusters framework.

Some sources (e.g. Complementary currency resource center) identify as CC systems also traditional non-monetary currency systems based on barter or currency based on seashells and others (Martignoni, 2012) refer to them as a „natural money“, but these are not going to be included to this paper. We are going to focus more on the systems based on initial ideas of Edgar S. Cahn and his „Time dollar“ idea from nineteen eighties (Ozanne, 2010) which fits more to the purpose and application of further results of the project.

Basic Division of the CC Systems

As there was already mentioned there are two basic types of CC currency systems LETS and the “Time banks”. As most of the LETS systems are already based on the alternative currency system in the other words LETS is expressly a currency designed to create an alternative economy, one that seeks to offer much that the global market economy offers but on a more decent, humane, sustainable basis. It seeks to carve out a (hopefully expanding) niche for a community-based economy in the global market economy (Cahn, 2001). We are going to focus more on time bank systems which represent an idea of reciprocal exchange of the work and services as one ‘hour’ for each hour of commitment can at anytime be ‘cashed in’ by requesting an hour of work in return from the system (Ozanne, 2010). In the essence the time bank is also the LETS system, but enriched by balance between give and take. Time Dollars are not an attempt to create an alternative to market. They are designed to rebuild a fundamentally different economy, the economy of home, family, neighbourhood and community. They are the Core Economy. The Core Economy exists side-by-side with the world of commerce – regardless of the medium of exchanges used to consummate transactions in that world. The Core Economy of home, neighbourhood and community is complementary, not alternative (Cahn, 2001). By that a part of the initial Cahn's idea is also the Time dollar. Time Dollars and LETS are both local currencies. Both eliminate interest. Both endeavour to strengthen community, to tap local capacity, and to offset or remedy some of the more toxic ramifications of the global economy. Time Dollars operate on the principle of an hour = an hour of any person's time, no matter what service they provide. LETS, operating as a barter currency, mirrors market pricing more although rates are determined by the value of the exchange to each individual (Cahn, 2001).

Time banking is built on essential elements (Ozanne, 2010; Банк Времени, 2011):

- We are all assets – every human being has something to contribute
- Redefining work – rewarding the real work in our society by creating a currency which pays people for helping each other and creating better places to live
- Reciprocity – giving and receiving are basic human needs which help to build relationships and trust with others
- Social Networks – building people's social capital is very important, belonging to a social network gives our lives more meaning
- Respect- encouraging people to respect others in their community

These high ideas are not only predetermining social improvements in globally understood society, they should improve any relationships in a network in general, thus the idea of application to the commercial sphere and by that company clusters should be taken seriously. This basic division is enough for our purposes so we are not going to follow CC type variants more space in this document, but for those who are interested there is more attention given to typologies of CC systems in (Martignoni, 2012).

Statistics

The certain number of CC systems in the world is unclear if we count the traditional ones we can come up to the number of over 5000 (Martignoni, 2012) or the Regional exchange system time bank from Ukraine on which site are also mentioned numbers of CC systems in thousands, including links to hundreds of the working ones throughout the world. On the other hand if we search the map of the Complementary currency resource centre, we are going to find slightly more than one hundred CC systems from which some were already stopped. In addition within the CC resource centre there is research undergo

via CC research mailing list focused on uncovering the real number of the functional CC systems. This uncertainty is probably created by fact that most of the CC systems are created on the non-profit non-governmental organization basis and voluntary organizations who have limited resources and also due to wide variations of CC systems for the particular needs of community. Nevertheless, there are some statistics to be noted (DeMeulenaere, 2007). In the year 2007 there were in worldwide database of CC systems 165 systems registered. Most of them are from North America, followed by Europe and Asia including Pacific Ocean. From which most of them used a token, coin or other kind of unit of value and only 26 of them use a unit of time. Most of the reasons for implementation are: Shaping a new social architecture, contributing towards a sustainable society, cooperation, Micro/Small/Medium enterprise Development, Reduce need for national currency, activating the local market, community development.

The annual report illustrates variability of CC systems and also facts which were already stated about the aims of CC systems and of course not all of them are intended to be part of the plan for Czech CC system implementation. Previous lines can lead to a conclusion, that the Czech system should be based on time bank methodology with partial focus on the enterprise development.

CC Systems in the World

In previous section there was already described in which main directions CC systems are taking part on global level. To apply it on time banking in Czech Republic we should, put it more into context of Europe and time banks, therefore few descriptions of time bank systems follows. The description was taken and translated from the manual for time bank client created by Russian Time bank in Nizhny Novgorod, as it offers nice view on variability of systems:

Sweden – The time is credited to the users, not only for organizations of various

events, but also for the participation on them. That means, a person which participates and gains use from the service gets the same amount of „hours“ as the person who offers it. By that „social capital“ is gathered. All clients of the Time Bank have opportunity to use their saved hours for services of the partner organizations, such as educational programmes, meetings or conferences. In Sweden is Time Bank used mostly in the field of self-education and also into the social inclusion of population with the less opportunities (minorities, refugees, disabled).

England – In England to this date works more than 100 Time Banks and practically all of them are part of the civic organizations such as: libraries, medical care centres, cultural centres etc. English Time Bank works more like a place for people to meet and it solves problems with solitude, depression and sense of inferiority. In England there is also central Time Bank, which focuses only on support to the other Time Banks and it is funded by annual lottery.

Scotland – In Scotland works the Time Bank on the basis of youth organizations (cultural centres, orphanages etc.) and clubs. By work in these organizations youth collect hours, which they can later be used in exchange for education, entertainment programs etc., into the municipal bodies who are partners of the Time Bank.

Virtual Time Bank (Germany, Slovenia, Poland) – In many countries is not Time Bank system based directly on personal negotiations, but it is virtual database, in which information about mutual exchange of services and counted hours are recorded. This scheme works in favour of the financial side, as there is no office necessary, but from the other side there is much worse control over the quality and safety of the services.

Spain – In Spain Time Banks are grouped according to the interest groups. That means it exist for example the Time Bank of medicinal services (for people working in medicine), woman Time Bank, Time Bank of teachers etc. Client of the one Time Bank

can be also a client of more than Time Banks and can also use their services. Services are really variable, for example, you are a client and you let other client to stay overnight at your place and by that you are earning just that 8-9 hours other person spent at your place. Each client has a “cheque book” from which he/she is issuing coupons with the amount of time they pay to you.

USA – In USA among others, it is also possible to exchange the time for material things. If you possess for example a computer which you are not using, you can give it to the Time Bank for 12 hours, or from other side, to take the one for collected 12 hours Anyway there is also at the use exchange of services according to the original idea. Other form of the use is for youth delinquents, who are detained for non-violent criminal offense and they work during their stay in prison. This work counts as a time for Time Bank account and it can be later used when prisoner is getting new start to his/her life.

Russia – Russian model is trying to keep as close to the original ideas of Edgar S. Cahn as possible. Its basic principle is interpersonal communication and active participation on the social system. Among others the Russian Time Bank is trying to motivate and stimulate their clients via club system.

The IT Issues

To keep fluent running the new CC system there is need for user friendly and functional software. Keeping all the project also on the internet is essential to keep CC system running on low costs and also accessible to more wide public. The elemental question is if to use existing CC software from the Dutch non-profit organization STRO called Cyclos which should contain all necessary elements, or if to develop own system on the basis of the university and to let it grow and adapt according to the exact system needs.

The Application on the Company Clusters

At the Information technologies department on our faculty, the Faculty of IT

and Management on University of Hradec Kralove there is also research in the field of company cluster work evaluation undergo. The sharing of resources and knowledge is essential for a cluster and it is at hand, that CC system could be perfect to deal with the flows within the cluster.

The research is now running for the third year. One of the last year results was also a case study focused on cooperation between Czech Stone Cluster and local authorities focused on the regional development. From the opportunities of the case study SWOT analysis there are following points which could be easily related also to LETS systems (Trousil, M., Jasikova, V., Maresova, P. 2011):

- Mutual promotion of the area and the cluster
- Deepening of the local and regional identity of the local population and strengthening social cohesion
- Collaboration

If we exchange word “cluster” for a word “LETS” it seems there is no difference in their needs as networks. As well as network organizations they represent a group of firms on the basis of formal or informal relationships, which are trying to gain competitive advantage by mutual cooperation. This cooperation is profitable if firm is not able to obtain enough resources or knowledge (Dedina and Odchazel, 2007). And if we go deeper to the issue we find out, that the networks of contacts and tight bonds between companies and other organizations in the region are raising the ability to mobilize resources and information and act more flexible regarding to changes. Trust is the integral element of almost all economical transactions and it is created by repetitively successful transactions on the basis of reciprocity and mutual profit. Its high level is desired from the point of view of economic effectiveness (Blazek, 2002). Here we can see that essential parts of the cluster aims and relations are the same like in within CC systems and including the fact the clusters are geographically close

bonded companies and other institutions in respective field (Skokan, 2004). Clusters are composed from corporate bodies in the same way like any other interest group of citizens is created by physical entities. From the last lines we can easily imply that also as companies in the clusters, ordinary citizens are sharing their knowledge and resources within LETS and time bank systems, therefore application of CC systems within company clusters is opportunity which shouldn't be missed.

How to implement Complementary Currency System In the Czech Republic?

As described in previous chapter, the range of the activities of CC systems is very wide and in each country it is adapted to the local needs and mentality. Such an adaptation is essential for the fluent operation of the CC project as in each country could be specific obstacles. Czech environment is specific by its conservative attitude to the new things and especially careful about falling victim to a fraud. This behaviour is quite understandable regarding to the historical development of the country, but unfortunately doesn't block the actual fraud attempts as good as it blocks attempts to improve the social situation and life in general. Therefore there was developed a set of implementation methods to overcome this expected rigidity and reluctance to accept such a “suspiciously” beneficial concept of CC system.

Whole project is planned to be engaged in the town of Hradec Kralove, the hometown of University of Hradec Kralove, Faculty of IT and Management with its scientific support. Town with the 94 373 inhabitants (all following figures in this section are taken from the Czech statistical office charts and results), is ideal for project of this kind. It is big enough to gather sufficient amount of citizens into the system, but small enough to make appropriate public relations easier and cheaper. Moreover Hradec Kralove is the capital of its region with 553805 inhabitants which brings even more opportunities to develop CC system. Hradec Kralove is characteristic with its calm

atmosphere. In contradiction with nearby capital Prague, there are much less community services and organizations. We see it as an opportunity, as in bigger city CC system could get lost in the sea of other non-profit community services and fail before it gets chance to get developed properly. It is also necessary to point out the fact, that to CC system we can include not only populace categorized as "economically active". Keeping that in mind we can include up to another 201600 people to the system (children up to age of 14 excluded). That means 272500 persons of economically active populace plus mentioned 201600 economically inactive makes 474100 potential users of the CC system in the Hradec Kralove region.

The idea how to implement CC system is to create separate sections of interest group with the common features or aim and by join them together creating "bubbles" of the people or organizations with the similar interests. Within these groups should be separately introduced the CC system. The suggested "bubbles" are:

- **Student bubble:** The first group should be the test group of the students of the university. It is most probably the best target group, for start, as students are opened to new things and they are used to share their skills and knowledge already. In the region of Hradec Kralove there are 48500 students in total, from which 8910 are students of University of Hradec Kralove.
- **Company clusters bubble:** Very promising and interesting field to develop the CC system as it was already illustrated in previous chapter. Clusters are already networks with its needs and to keep exchange within clear and fluent, the transparent system would be beneficial. Cc system could be a solution. According to the research mentioned above, there are six clusters which operate in Hradec Kralove region in focus. From these, there is one (Czech Stone cluster) which was subject to research already in the past years and it is task of this year to set up a research

based cooperation with the remaining five.

- **Unemployment office bubble:** A social bubble for the unemployed people who actually cannot perform their profession as they are not demanded by labour market at the moment and they are taken care of by an unemployment office. By CC system they can stay in touch with their profession, don't lose their self-confidence and get some services in return. According to the records of the Czech statistical office there are 18700 unemployed, which makes a rate of 6,9%. This amount includes of course also voluntary unemployment. This could be also reduced, as voluntarily unemployed people don't follow the traditional concept of work, but they could be attracted to the system by doing the things they like for something in return.
- **Non-profit, non-governmental organizations (NGO) bubble:** NGOs can very often offer a lot to the commercial sphere and vice versa. There is already one project of Foundation of telecommunications company Vodafone Czech Republic called "Rok jinak – Year differently", which offers its employees to spend time by working for NGO of their choice and managers of NGOs have opportunity to spend time and work in Vodafone. Therefore inclusion of NGOs to the CC system shouldn't be missed.
- **Retired professionals bubble:** There are many specialists in their fields who already retired and they would be willing their life long experience and skills in exchange to the services and new knowledge. To the professionals we count any person who is willing to share his/her life experience. In the region of the Hradec Kralove there are 125700 of people in retirement.

The order of project engagement of each interest group is not essential in this case, but probably most opened to the inclusion to CC system and easiest to work with would be "bubble" of students and "bubble" of company clusters. That leads to conclusion, they are going to be best to

start with. Following progress is to create all bubbles to live and share separately and after they are stable and working, offer them opportunity to join other bubble(s). By merging, each group gain access to the more possibilities, resources and services and it can bring also new ideas. The target is that all bubbles are going to merge together creating one large base of knowledge and skills to share. On the other side there could be obstacles preventing such a final merge, especially on the side of commercial sphere. Some companies could be afraid of losing their intangible assets to competition. In that case system should be able to run separate bubbles for the indefinite amount of time. Of course system should be also open to accept new bubbles based on the will of system users and research results. The case of the unemployment office bubble and retired professionals bubble merger is easily imaginable as current labour market is characteristic by its reluctance to employ people with higher age, yet these people already possess skills and knowledge gained by experience which their younger counterparts are struggling to gain.

The technical and technological side of the project is still subject to further research and it is going to be also for the future. There are many challenges to overcome, especially the ways of managing the project, public relations, quality management or funding. Also from the IT point of view there is a question if to adopt and use mentioned Cyclos system or to develop new original system from the resources of the university.

Results and Discussion

One of the outcomes of this paper was collection of attitudes and methods of CC systems being used in other countries than Czech Republic where they work with various levels of success, somewhere for short time, somewhere for long years. Than research how they can be used to give the first Czech CC system good start. As we learned, many of elements can be adopted and included in our CC system and extensive research was necessary and still is, to find new good practices and

approaches. It is also clear that many of the elements of the Czech CC system have to be designed from the scratch.

There is also a slight difference between Czech planed system and the ones already uncovered by our research so far. Aim of most of CC systems is aimed into social development. They are often run by voluntary organizations as a way how to help each other service for service or they are set up as mediators to support needs of citizens in regions where market role of the money is focused more on generating profit rather than the mediator of exchange and citizens themselves decided to create more fair method of the exchange.

As the essence of the ideas of CC systems stands still in the planned Czech system and the social advantages it brings to the community are to be stressed like in the other CC systems in the world, the system should be enriched by inclusion of the commercial sphere by the company clusters. It offers not only more opportunities for fair cooperation and synergy to the members of the clusters, but it can also bring them closer to their customers, strengthen cooperation within the regional institutions, gives more clear and fair terms for cooperation and by cooperation gives more ideas, resources and knowledge to compete better on the market.

Careful approach and backing of the innovative research facility as Faculty of IT and Management, of the University of Hradec Kralove is, should give the project high credit from the beginning as well as personal resource for research purposes. It is also expected that cooperation with science facility persuade the companies and also citizens to take project more seriously and prevent initial scepticism about it. As it has been already noted, Czechs tend to be very mistrustful to the new things and breaking this first barrier is one of the biggest challenges of the project.

Because the project is still in very early conceptual phase, there is necessary to conduct full scale research on practically all the elements from which it consists of.

There are not only management issues, but also financial ones, psychological or issue of the IT system. Development of new IT system is not absolutely impossible and Faculty of IT and Management has already very good specialists at its disposal, but the necessity and investment of effort and resources to such enterprise should be also subject to the further research.

Other variable are tax issues as Czech law might not be ready for such a new thing like CC system and because all the system has to be absolutely legal, therefore a big challenge to overcome is to align CC system with Czech law. During the research there has been found out that there are CC systems working also without being anchored in the law as well as there are countries, like Canada, where issue of CC is covered by local law (Calgary dollars).

Conclusion

After initial research throughout complementary currency systems working in the world, there has been found that although they share common ideas the understanding and adaptation of many of them differs them by a great deal. The adaptation gives them ability to survive and supplement the society with necessary features of the monetary system where it fails; it also gives the alternative or support new dimension of the interpersonal relationships. Into these relationships we can include also the corporate bodies and by that develop the CC system to the new level. With the many opportunities for the application in the Czech environment illustrated it is very viable idea to continue the research and preparations for the implementation of such a system. The challenges has been set, therefore the future course of action should be to find the way to overcome them and prepare the field for a successful start of the complementary currency or its variation, the time bank system in the Hradec Kralove, Czech Republic starting by inclusion of the experimental group of students of University of Hradec Kralove and later progressing to the company cluster adaptation.

Acknowledgement

This paper was created with the support of the specific research project "Application of selected methods of cluster initiatives evaluation in the Hradec Králové region"; and INDOP, ESF funded project, identification number CZ.1.07/2.2.00/28.0327.

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