

The Possibility of Using Alternative Currencies in Function of Development of the City of Zadar

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Abstract. This paper points out the problem of globalized market effects for local economies, that is how it directs money, generated in local communities, towards investments and capital centers. It has also shown the disproportionate development of diverse parts of the Republic of Croatia and the centralization of the Croatian economic system, institutions, policies and its consequences for the local Zadar community. Alternative currencies have been introduced as a new approach of perceiving money which is trying to prevent the outflow of local resources and the deterioration of local economies. The study also discusses some examples of good practice according to types of alternative currencies that are relevant for the model used in the City of Zadar. Thus, a dual model of alternative currencies with time credits and local currency was proposed, trying to influence the economic situation of the community and improve the social structure of the population at the same time.

Keywords: alternative currencies, local community, city of Zadar, local currency, time credits

1. Introduction

A phenomenon of the financial markets instability increase through the development of the same is present in the modern economy. Trade balances on international markets reach impressive amounts, but the question is how much of that trading is of a speculative nature and how much is actually used for the real international exchange of goods and services. Taking into account modern trends, government monetary systems act as agents of the global network market, instead of being subordinated to their users in function of effectiveness and fairness. As a consequence, less attractive investment areas remain left in the problem of inadequately utilized local resources, as well as their outflow, thus further deepening the differences and inequalities of local economies. The paper hereto is based on the attempt to create a more powerful and independent local community, threatened by the current system, using alternative approaches.

The monetary system, reflecting the structural problems and disadvantages in its subordination to the trends of global financial markets, demonstrates the inertia, fragility and poor adaptability of monetary tools. These are same tools that were designed few centuries ago, and now face the challenge of resolving the intricate components of the current economic system. The approaches of new economies that propose a different perception of money are advocated in response to this issue, review of priorities by targeting objectives towards the general welfare of society and sustainable development based on local community levels. Thus a model of alternative currencies was proposed in

this paper that would help economic development and general improvement of the local community of the City of Zadar.

The Republic of Croatia is characterized by a highly centralized system that reflects the economic activity of local communities. This is also supported by the latest publication on the topic of share of Counties' GDP in the GDP of the Republic of Croatia for 2017. There is a clear continuation of the trend of disadvantageous proportions in the counties, i.e. the development in the same, so that a disproportionately lesser development of the Zadar County compared to the most developed County of Zagreb is displayed, which is conditioned, among other things, by the outflow of local money and resources. Zadar County needs a system that attaches importance to sustainable development and includes economic, social and environmental spheres. It is necessary to enable the local economy of Zadar and its surroundings a framework that can rely even more on itself. A major cyclic and less linear form of local activity will reduce dependency on import as well as export. It would contribute to the increase of the local system self-sufficiency, as well as its resistance to external market shocks.

Alternative currencies, also called complementary, local currencies, regional currencies, community currencies are often used as synonyms, although they do not indicate the same meaning. They have gained progressively more importance in the modern period, which is also substantiated by the research data (Seyfang, G. & Longhurst, N., 2013), stating that there are 3,418 local projects installed on national basis. Although currencies of these types are gaining attention not only in practical spheres, but also in the scientific circles, most papers are based on the impacts arising from the implementation of the same. Literature dealing with classification and organization of emerging forms of complementary currencies is quite scarce, and Blanc (2006), Blanc (2011), Martignoni (2013) and Seyfang (2013) should be noted as the most prominent ones. Martignoni (2013) clarifies why is it difficult to make a classification of such currencies, which builds up to previous work on classifications that encompass all forms of currency. He explains the issue on dimension of media that was so far divided into money covered by a commodity, paper or coinage money, electronic money and hybrid forms, and since many complementary currencies have the features of hybrid forms, the classification itself does not provide much insight (Martignoni, 2013).

2. Alternative Currencies as Means of Payment

The project of introducing complementary currencies in the City of Worgl in Austria was recorded in the period from 1932 to 1933, as one of the first in the modern time. A model that accelerates the circulation of local money was organized and designed to revitalize the local economy, as the population of 4,500 at that time had 500 unemployed and another 1,000 in the immediate vicinity. At the initiative of Mayor Michael Unterguggenberger, the city paid the entire budget to the local deposit bank as a guarantee for the issuance of special 40,000 shillings in the form of security stamps. The condition was that the securities holder redeemed a security every month, so that it may continue staying in circulation in the amount of 1% of the nominal value of the security itself. Using this principle, users were more motivated to spend money faster, and if they did not want to spend, they decided to pay taxes earlier (Lietaer, B., 1999). Inspired by the success of the City of Worgl, as many as 170 towns in Austria were planning to introduce such a currency system, but soon after the Austrian National Bank warned of the loss of authority and monopoly of the national currency, the Austrian government banned the introduction of local money with stamps (Blanc, 1998).

Modelled on the example of the City of Worgl, even today cities or areas are introducing local or regional currencies. In most cases, they are convertible to national currency and before the conversion, they are circulated to a particular area or among participating entities, that accept local currency as means of payment. When issuing a currency, the practice is such that the central authority mainly issues it. The most common form of complementary currency is constituted by service credits. They function on the basis of reciprocity, with the goal of building social capital, cohesion of the

population, and greater participation of individuals in society in general. Currency has a stand fast in time, and members who are involved in the system must indicate which services they offer and seek. Members then earn a time credit that can be retained for future use, donated or they can purchase services from other members. This contributes to the relinquishment of the exclusivity of the labour market estimate, since everyone's time has the same value. The most common type of such currency schemes are Time Banks (Marks, 2012). Mutual exchange schemes are also distinguished, in which the currency is generated by the act of spending, i.e. the credit of one person corresponds to the debt of another respectively. Usually they are used within a defined geographic area, by providing users with an interest free credit that can be used within a trading circle. In the literature, such systems are referred to as LETS (Local Exchange Trading Schemes), (Taylor, 2013). The markets of traders who have the hybrid features of local currencies and mutual exchange schemes and form a new infrastructure are worth mentioning also, providing people with the opportunity to swap goods and services that cover a specific area.

By the introduction of alternative currencies, the communities have positive effects on development, something that scientists exposed in many papers, so Fare (2012) suggested that the survey of 97 members of the French SOL Scheme demonstrated 60.8% of respondents in increasing local product consumption (Fare, 2011). Groppa (2013) reported that 60% of the respondents of Punto Transacciones currency scheme recorded a significant increase in sales and that 70% of business entities financed business operations with complementary currency (Groppa, 2013). At the example of local exchange schemes in the United Kingdom, Williams et al. (2001) stated that but for LETS scheme, 27.4% of goods and services would have otherwise not be available (Williams, 2001). Positive effects are also reflected on social indicators, as outlined in the paper of Jacob et al. (2004), where 30% of Ithaca Hours system users reported increased self-confidence as a result of membership in the form of time banking. The effects of the largest complementary currency-denominated currency, the Swiss WIR-Bank system should be also noted, which has also a macroeconomic stabilizing impact with its counter-cyclical impact by its annual trade level of CHF 6.5 billion. Likewise, the system can serve as a powerful instrument in effective macroeconomic stabilization compared to the use of, for example, M2 pecuniary volume (Stodder, 2009). Stodder (2016) remarked how the credits were controlled more efficiently, because the WIR bank has the function both of a commercial bank and central bank (Stodder, Lietaer, 2016).

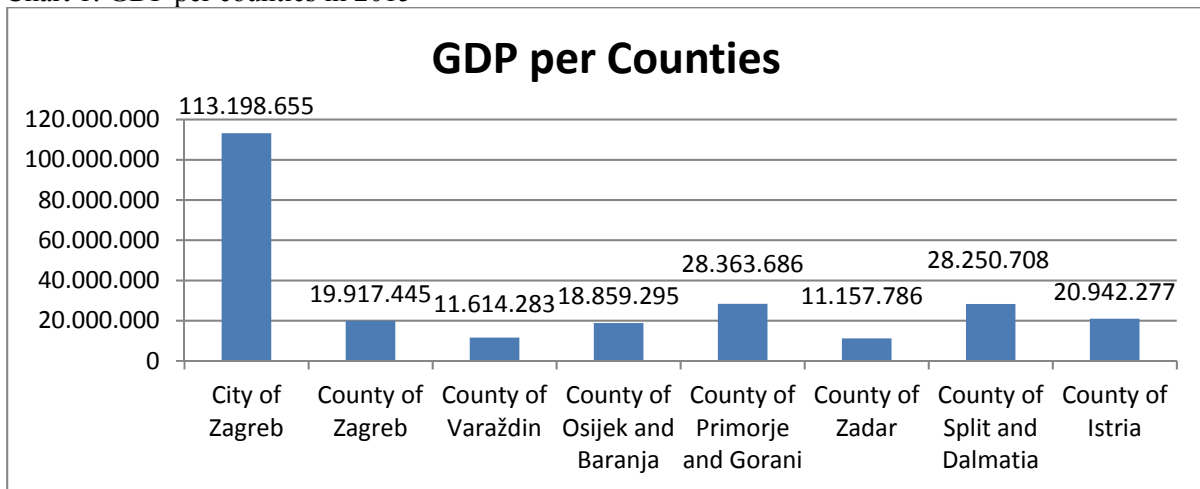
3. Analysis of Economic Indicators of the City of Zadar

The centralization of the Republic of Croatia is manifested in a number of indicators, such as administrative institutions, population numbers or disproportionate economic development of the regions. Based on the latest final processed data for 2015, the GDP per capita of the City of Zagreb is 2.18 times higher than the Zadar County GDP per capita or 136.640,00 Croatian kuna in the City of Zagreb as opposed to HRK 62.540,00 in the City of Zadar. The difference in scale is even more apparent between the City of Zagreb, which has the largest share of 33% of the total GDP of the Republic of Croatia, whereas the County of Lika and Senj has the smallest share of only 0.9%¹. The following chart shows the GDP of Zadar County in relation to the figures of counties with higher GDP in 2015 expressed in thousands of HRK²:

¹ Hrvatska gospodarska komora, (2017), *BDP i gospodarska snaga županija, Zagreb: Odjel za makroekonomske analize-Croatian Chamber of Economy*, (2017), *GDP and economic power of counties, Zagreb: Macroeconomic Analysis Department*

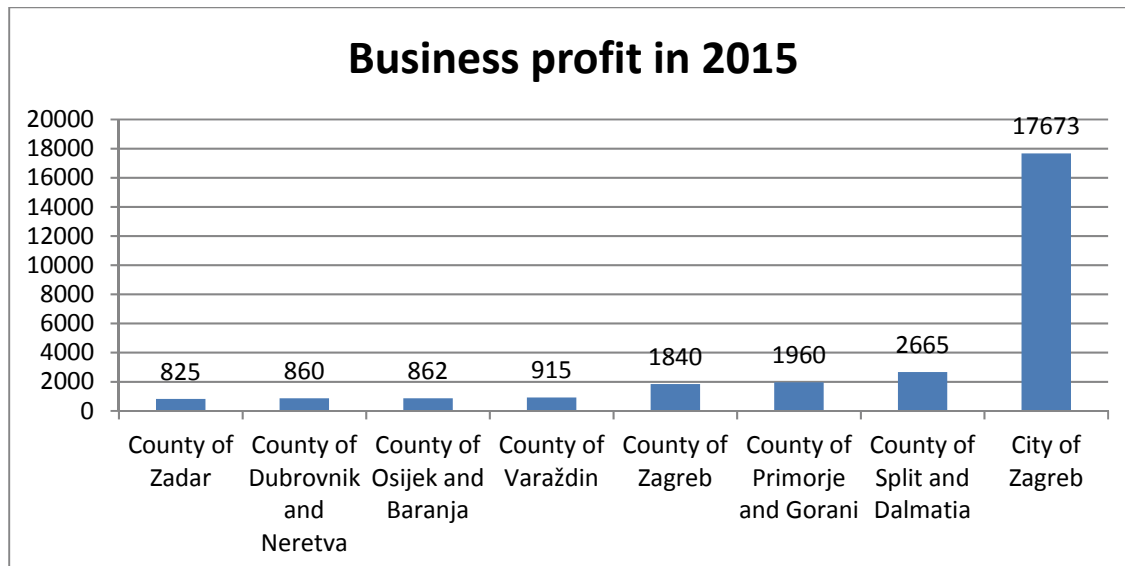
² Državni zavod za statistiku, (2018), *Bruto domaći proizvod – pregled po županijama., Zagreb: Državni zavod za statistiku RH- Central Bureau of Statistics*, (2018), *Gross Domestic Product - Survey by Counties, Zagreb: Central Bureau of Statistics of the Republic of Croatia*

Chart 1: GDP per counties in 2015



According to the average economic indicators in the Republic of Croatia, Zadar County is one of the most successful local units. A concept of success is relative in this case, as the County of Zadar faces numerous problems and challenges. The number of unemployed in 2010 was 6,444 out of 60,000 active people, i.e. employed and unemployed³. The average net salary in the Zadar County in 2015 amounted to 4,711,11 kuna, while the average Croatian net wage for the January-August period in 2015 amounted to 5,693,00 kuna⁴. Statistics point to reduced utilization of local labour capacities, which can be changed by the positive effects of introducing local currencies in which labour capacities primarily and production capacities would be activated. The following chart shows the amounts of business profit after tax in 2015 by entrepreneurs per county expressed in millions of HRK⁵:

Chart 2: Entrepreneurs profit by Counties



³ Hrvatska gospodarska komora, (2016), *Gospodarska kretanja Zadarske županije br. 32 Zadar: Županijska komora Zadar- Croatian Chamber of Economy*, (2016), *Economic Movements of the Zadar County no. 32 Zadar: County Chamber Zadar*

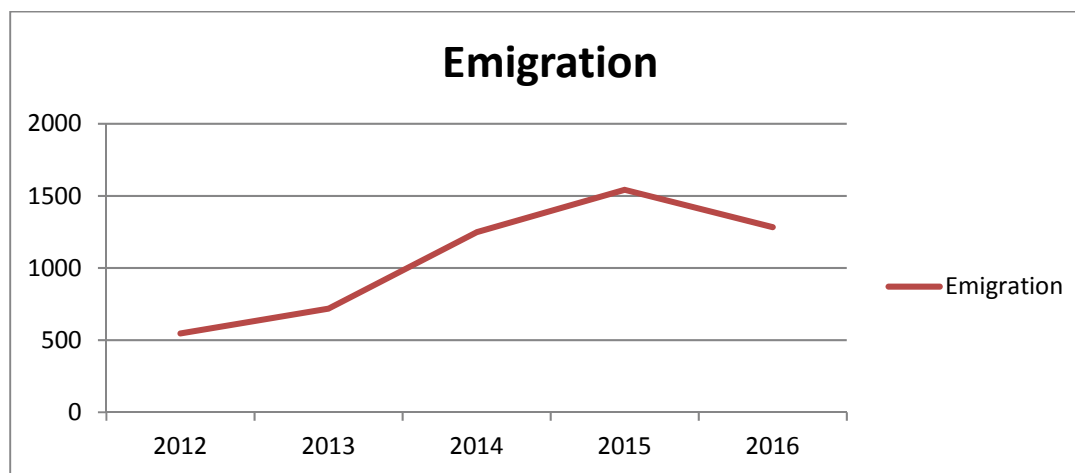
⁴ Državni zavod za statistiku, (2015), *Prosječna mjesečna isplaćena neto plaća po zaposlenom u pravnim osobama Republike Hrvatske za razdoblje siječanj-kolovoz 2015.*, Zagreb: Narodne novine- Central Bureau of Statistics, (2015), *Average monthly paid off net earning per person in paid employment in legal entities of the Republic of Croatia for January-August 2015*, Zagreb: Official Gazette.

⁵ Hrvatska gospodarska komora, (2016), *Županije – velike gospodarske razlike na malom prostoru*, Zagreb, Hrvatska gospodarska komora- Croatian Chamber of Economy, (2016), *County - Large Economic Differences in Small Space*, Zagreb, Croatian Chamber of Economy.

The greatest difference between the Zadar County and the County and City of Zagreb is apparent, showing a solid trend of uneven development of the regions. The poor economic situation in the local community presents a setting even for negative demographic indicators that represent pressing issues for functioning both of the state and local economy. It points to a relevant number of unemployed in a society where part of the labour decided to emigrate, affecting the consequences primarily on labour market and other factors of the economy as well.

The following chart shows the emigration of the Zadar County population by years⁶:

Chart 3: Zadar County Population Emigration



It should be noted that only persons who have regularly unregistered the residence are included in the immigration data, so that the real number is likely higher. Emigration also affects social relationships in the local community. Zadar County is a specific place due to major war activities in its area during the 90's of the last century, and thus a large number of defenders among its population, which are often socially marginalized parts of society. Defenders are an important category of the Zadar County Social Plan for 2015-2020, especially those who are facing problems of poverty, disability, unemployment, illness, housing issues and difficult social contacts⁷. In addition to the local currency economic impetus, the County of Zadar also requires an alternative currency that could strengthen the social capital of the community and solve social problems more effectively in relation to the ineptitude of passed measures.

4. Examples of Good Practice

Below you will see systems that have been successfully implemented, providing positive effects and matching the functional form of the system proposed for the Zadar area. It is about the currency scheme of regio - money, i.e. the form of a local currency based on time credits scheme.

⁶ Državni zavod za statistiku, (2017), *Migracija stanovništva Republike Hrvatske u 2016.*, Zagreb: Državni zavod za statistiku RH- Central Bureau of Statistics, (2017), *Migration of the population in the Republic of Croatia in 2016*, Zagreb: State Bureau of Statistics of the Republic of Croatia

⁷ Zadarska županija, (2015), *Socijalni plan Zadarske županije za 2015.- 2020.* [Internet] <raspoloživo na: <https://zadarska-zupanija.hr/kolegij2015/33/1.1.pdf>> [20.02.2018]- Zadar County, (2015), *Zadar County Social Plan for 2015-2020* [Internet] <available at: <https://zadarska-zupanija.hr/kolegij2015/33/1.1.pdf>> [20.02.2018]

- Chiemgauer Regio – money

Chiemgauer was conceived as a school project by Professor Christiana Gelleri at the Waldorf school in the City of Priem am Chiemsee in the south-eastern part of the Bavarian region, where about half a million people live. The project is designed to satisfy any interest group that is part of the project itself, respectively more business turnover, school sponsorship and motivation of parents, professors and students to participate in project. The project had to be separated from the school when it became too large and then five regional offices were opened in 2005. The Chiemgaure banknotes were issued in denominations of 2, 5, 10, 20 and 50. The value of a Chiemgauer is one euro. Chiemgauer banknotes mature, and the 2% deposit fee is calculated on a quarterly basis and 8% on an annual basis.

Euro could be replaced by Chiemgauer in 50 releasing offices in the region in the ratio of 1:1. As a bonus, a non-profit organization that gets 3% of the exchange could be chosen. This way, users could support their organization or general activities for greater good. During the evaluation of the project Gelleri (2009), we observed that 2500 users were exchanging € 100,000 in Chiemgauer on a monthly basis. That means that non-profit organizations have received 3000 Chiemgauer per month or 36,000 per annum. If subjects possessed a lot of Chiemgauer, they could exchange them back to Euro, but then they paid 5% (Gelleri, 2009). In the long run, by circulating Chiemgauer, regional assets became cheaper and global assets more expensive. Increased demand for local goods produced synergistic effects of mutual business, which means that the distribution of funds to non-profit organizations prevented inflation to flow. By using Chiemgauer in 2008, a growth of 30% to 3.6 million of Euro was recorded, of which a third of traffic was considered as newly generated local circulation, which amounted to about 600,000 € of additional value. Although business entities had to pay 2% on Chiemgauer traffic, by using currency they achieved various compensating effects. For example, promotional costs that can amount to more than 30% of the cost of an enterprise, their reduction positively affected the business networking of the system itself.

- Spice Housing Time Credits

Complementary currencies are subject to constant innovations to represent a more functional framework and provide solutions to a distinct and specific community. Thus, the Spice social organization has devised a new method of time banking in the services of housing units. Spice used time banking as the ultimate tool for promoting active citizenship, reducing social dependence and ultimately reforming public co-production services. The new system is trying to respond to the challenges of traditional time banking such as limited funding, not spending time-based credits due to poor spending options or difficulties in accepting the concept of reciprocity. United Welsh Housing Association in Cardiff signed a contract with the Spice organization that implemented time banking as a method for increased tenant participation and revitalization of time banking. Until then, there were problems of gathering the critical mass, failure to include socially excluded, reducing the positive effects and participation.

A system was established in which tenants earned credits for participating in tenant meetings, providing feedback and participating in organizing events. Tenants had the option to spend credits on a list of prizes and activities in partner entities. Some of them included the Climbing Centre, the Art Centre, the Cardiff Blues Rugby Organization and the hairdressing salons, all of which were all interested in increasing and building social responsibility goals. Local authorities also accepted Spice credits for access to public swimming pools and gyms to help include the socially excluded to their services. The added benefit of using the system was the involvement of users in healthy living activities. The advantage of Spice Time Credits is that the rewards were based on the preferences of their customers, which was in support of the system dynamic development. As a result, increased participation is shown as an increase in joint work and participation in healthy lifestyle activities. It is

also possible to obtain accommodation and food for the most vulnerable - the homeless (Naughton-Doe, 2011).

5. Proposed model of alternative currencies in the function of the City of Zadar development

A model that has scope for action in the area of Zadar or Zadar County is presented in the sequence of the paper, due to its economic, political and administrative impact of the city area itself. The model is based on the concept of duality of time credits and local currencies. Following the introduction of democracy in the early nineties of the last century, the Republic of Croatia still faces challenges of introducing democracy in decision-making, corruption and the inertion of bureaucratic apparatus, which poses a number of economic difficulties, such as entrepreneurial climate, social difficulties of engaging marginalized parts of the community, and among other things the reintegration of numerous population of Croatian defenders. In order to influence the problems of individuals, it is necessary to listen to the needs of the population, and if we consider that the national economy consists of many local economies, it is necessary to act at the local level. The resolution of bureaucratic inertion and operational flexibility can be established by the action of local self-government in complementary systems, so that authors, based on conducted research and studied examples of good practice, proposed the introduction of dual complementary currency system in form of Jadera Time Credits and Donat local currency.

5.1. Jadera Time Credits

The system of time banking would be implemented through the institutions of local self-government, i.e. through the Zadar Department of Social Affairs and Health. The Department proposes program expenditures approved by the City Council and Mayor, and since at the time of this paper elaboration the program for 2018 is still being implemented, the Social Welfare and Health Program for 2017 will be used. Below you can see the amount of costs per item (City of Zadar, 2016):

- Social Program of the City of Zadar (10.663.900,00 kn)
- “Latica (Petal)” kindergarten and Mocire Centre (5.113.000,00 kn)
- Health Care (HRK 960,000.00)
- Croatian Defence Forces (765.000,00 kn)

The Zadar City Administrative Department would thus be the central authority in the formation of the system and the transfer of operational activities to programs that are of immediate relevance to Zadar. The great advantage of activating the system through local government is to dynamically adapt to changes in funding priority and adaptation strategies. Users can earn time credits through organizations at program points to participate in volunteer work, provide feedback during polling or research. Some of the organizations are, for example, Dom Sv. Frane (St. Francis Home), Hearing Association, Red Cross Society, Volunteer Centre, Homeland War Veterans Association. By involving social welfare organizations and health in the listed program, a synergy effect would be created in which organizations and various associations can meet mutual needs through reciprocal action. The precondition for reciprocity would be easier to achieve through the cohesion of public organizations and non-profit organizations across the central authority of local self-government. In addition to motivation in volunteer work, participation in the system could be increased with a higher chance of spending time credits in organizations that are budget users of the City of Zadar. Thus, users of the Jadera Time Credits system could use the services of the Scientific Library, the Concert Office, City Library, Liburnija, Višnjik sport centre and others.

Former practical examples have shown that this kind of exchange does not distort the exchange that would take place in the national currency, but services are used that would not be used without the system. Jadera Time Credits are not convertible into the national currency, and the primary function is

to increase socially-conscious work and to improve the service delivery system. Such a system does not pose potential tax evasion, as the range of services that can be provided can be regulated through central authority, and include those that are in the domain of non-profit work. Thus, the system is in line with the laws of the Republic of Croatia which do not regard such forms of work as income or taxation basis.

5.2. Donat local currency

The Donat currency would function on the principle of local currency primarily intended for businesses that are in digital and/or paper form, depending on the funding possibilities of the project. Donat is convertible in the model and relies entirely on the national currency, i.e. HRK in the ratio of 1:1. The model has a hypothetical numeric attribute, in order to justify the project sustainability and the motivation of participation. Donat securities deposit fee would be calculated on monthly, quarterly or annual basis, depending on the administrative potential of the project management. For example, a 1% deposit fee on a monthly basis was taken to accelerate currency circulation and encourage local goods exchange. Customers would also be charged for the 2% of the dedicated traffic cost, as well as the 3% conversion cost when changing Donat to Croatian Kuna. As a justification for using and compensating for Donat local currency usage, tax and communal fees reduction to business entities is suggested in excess of the cost of using the local currency itself. This way, users would be motivated to get started in the system. The local currency system can be taxed without major difficulties, which is enabled by the conversion condition in the national currency. Laws in the Republic of Croatia have no framework for introducing an alternative type of currency for commercial purposes. Nevertheless, the Law on the Croatian National Bank states in Article 27 of the Enforcement of Other Issues states that the CNB may by subordinate regulations regulate all other issues related to issuance, printing and minting, handling and processing, supply and replacement of banknotes and coinage. With the support of state institutions, the legal framework can be regulated by the central bank regulation on the issue of currency itself.

- System duality

Duality in the proposed model is reflected in the fact that Donat royalty fees would be channelled to finance Zadar City Administrative Department, or city budget beneficiary organizations respectively, which are providers of the Jadera Credits beneficiaries, thus enabling cost sustainability due to participation in the Jadera system. In this way, it is possible to involve as many public institutions and companies as possible in the system, contributing to the expansion of services and the ability to spend Jadera Credits, which implies the effectiveness of reciprocity in the system. The project administration could also be funded by the listed revenue. Although Zadar revenues through tax and communal fees make up a good part of the revenue, for example 43% (City of Zadar, 2016) of tax revenues in 2018 and their initial reduction is unquestioned, it is possible to realize the financial leverage. This would reduce spending on social and health programs, as business entities directly participate in the financing of such programs. With the success of the project, a new economic project would be created, as is the case with other practical examples and thus cause a rise in City of Zadar income. Thus, economic entities need not only be motivated by tax incentives to participate in the project, but also with many economic advantages of the alternative currency itself.

6. Conclusion

Alternative currencies that are complementary to national, primarily for their own purpose, have a unique approach to equalizing the relevance of the relationship between the amount of currency in circulation and the quantity of goods and services on the market. Complementary currencies provide a fast and flexible way of economic development, which at the same time cares about rational consumption, the general welfare of community members and reasonable and sustainable use of its

resources. The proposed model can influence the development of the economic and social image of the community of the City of Zadar, which would potentially boost the economy, consolidate and connect the social structure of the city itself. The resistance of local community to external economic shocks and flexibility in market movements would increase. The advantage of the dual model is reflected in the involvement of the majority of community interest groups, which involves the cooperation of local self-government, business entities, non-profit organizations and individuals. The scope of the project can be achieved in such a way, since the model is based on the top down approach, providing the local government with the option to use the alternative currency system as a policy tool. The needs of some communities are not always the same in any given period of development. It is necessary to identify the causes and parts of the economy which register the most outflow of the resources of the local community itself. Such an alternative currency approach can be a dynamic system instrument in solving short-term and strategic issues of the local community, the community of the City of Zadar and the Zadar County respectively.

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