# The Effects of Alternative Currencies to National Economies: The European Experience


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**Abstract** The international economic crisis has affected European countries in many ways. Certain countries like Spain and Ireland are facing negative effects to their national economies because of their banking systems and real estate bubbles. On the other hand, Greece, Italy and Portugal are facing the consequences of fiscal imbalances and high debt. Greece in the recent past has confronted the possibility of an exit from the eurozone (Grexit). Under these circumstances the European economies are looking for policies in order to overcome the negative effects of prolonged recession or stagnation to their national economies. The aim of this article is to study the development of alternative currencies for the European Union in two phases. Initially, we study the development of alternative currencies after the adoption of the euro as the official currency of the eurozone and the replacement of national currencies in 2002. The second phase is the manifestation of the world economic crisis, 2007 until 2016. The study of alternative currencies will reveal whether they constitute an alternative option in order to strengthen national economies in the context of the euro area.

**Keywords** Alternative currencies • Eurozone • Economy

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## 1 Introduction

The ongoing world economic crisis had led to slow economic growth and stagnation for certain developed and developing economies. The European Union is also facing the implications of the international economic crisis, which include high rates of unemployment and restriction of liquidity in the real economy. In order to overcome the lack of liquidity, local communities are developing complementary currencies for the accomplishment of sustainable development (Seyfang and Longhurst 2013). Local exchange trading systems (LETS) were developed in the 1980s (Blanc 2011). More specifically:

> The most well-known example is the local exchange trading scheme (LETS), pioneered on Vancouver Island, Canada, 1983, by community activist Michael Linton, as an 'emergency money' during recession (Seyfang and Longhurst 2013, p. 69).

Today, LETS are a part of complementary currencies and at the same time provide the starting point for the development of this alternative way of transactions. Civil society has played the key role in the development of LETS. Technology has also played a key role in the development of LETS (Boonstra et al. 2013). The aim of this article is to study the development of alternative currencies in the European Union in two phases. Initially, we study the development of alternative currencies after the adoption of the euro as the official currency of the eurozone and the replacement of national currencies in 2002. The second phase is the manifestation of the world economic crisis, 2007 until 2016. The study of alternative currencies will reveal if they constitute an alternative option in order to strengthen national economies in the context of the euro area. We are going to explore to what extent alternative currencies strengthen the local economy and are an efficient way to restrict unemployment.

## 2 Complementary Currency Systems

The evolution of technology and the manifestation of the world economic crisis have created new prospects for complementary currency systems (CCS). Money is the catalyst of the world economy at periods of economic growth. But after an economic crisis, each national economy has to confront a lack of liquidity, and the monetary policy at certain times seems unable to create economic growth. Complementary currency systems try to overcome the restrictions of monetary policy and offer a sufficient income for consumers (Boonstra et al. 2013). Complementary currency systems can create a demand for goods and services and boost economic growth. The augmentation of this transaction system is related to the participants in the CCS and their motivations, as we can see in Table 1.

Table 1 highlights that the participants in CCS have different motivations which are mainly divided into economic and social motivations. For example, participants in the IT group such as programmers, hackers and digital specialists want to serve their community by offering independence from the official monetary system. On the other

**Table 1** Participants in CCS and motivations

| Participants | Motivations |
|---|---|
| Grassroots initiatives | People are motivated by their dissatisfaction with the capitalist system and the power of financial institutions and want to make room for a societal change |
| Commercial firms | Some participate in the commercial barter industry. Entrepreneurs in this group establish complementary currencies as a business instrument to increase profits (especially in the United States) |
| Non-profit sector | The motivation of the actors in this group is more idealistic than it is commercial |
| IT | Members of this group are often driven by a technical or ideological fascination.<br>Bitcoin is the most famous example |

Source: Boonstra et al. (2013, p. 6)

**Table 2** Schematic overview of complementary currency systems and results

| Money design | Economy | Social | Comments |
|---|---|---|---|
| Regional currencies | No additional medium of exchange | Work well in contributing to forming an identity | Disconnecting from legal tender will increase economic impact |
| Barter networks | An extra medium of exchange for businesses | Function like business clubs | Strengthen small- and medium-sized companies when focusing on daily spending |
| LETS | Has no impact on economic domain | Only impact for very small group | Economic impact is larger when focusing on firms instead of individuals |
| Time bank | Supply of services is limited, velocity speed can be low | Strengthening social capital | Focus is on community-building instead of currency design |
| P2P | New way of creating money | Possible to make anonymous transactions | Change the role of central authorities in money creation |
| Mobile money | Increases amount of money in formal economy | More people have access to banking services | Mainly popular in developing countries |
| Virtual money | Can keep money inside a certain system or region | – | Offers a perspective for conditioning of money flows; could help fight poverty |

Source: Boonstra et al. (2013, p. 26)

hand, commercial firms, especially in the United States, clearly have economic motivations and are profit-oriented. Moreover, the development of these currencies has made it difficult to categorise them into different schemes. In Table 2, we can see the main types of complementary currency systems and their characteristics.

Regional currencies have an aim to boost the local economy of a certain region. Regional currency works as a multiplier for demand and in Europe has positive

results in Germany and the United Kingdom. In the next section of our analysis, we are going to focus on the Chiemgauer in Germany and on the Bristol Pound in the United Kingdom. Moreover, barter networks offer the opportunity for products with a high profit margin such as services to overcome the negative effects of economic recession. LETS, on the other hand, are another way to overcome the restrictions of official banknotes. The experience has shown that spending is harder than earning credits for LETS. We can see also other CCS such as time bank, which has a social aim to strengthen community-building. Technology also offers new prospects for the expansion of complementary currency systems through mobile phones, peer-to-peer money systems or the internet.

Figure 1 demonstrates the implications of the local currency for consumers, retailers and local suppliers. It is obvious that local currency offers liquidity to local suppliers and operates as multiplier for local economy.

An analysis of complementary currency systems highlights that the development of alternative currencies has different motivations and different impacts on local or national economies. In the next section, we are going to discuss the CCS in the European Union as a result of the world economic crisis, with a special focus on regional currencies.

## 3 Complementary Currency Systems and the European Union

Regional currencies have developed in recent years in the European Union. According to Table 3, local currencies were developed for the first time in Germany in 2003 and are estimated to be around 30. On the other hand, the development of local currencies in the United Kingdom started in 2007, and the number of regional currencies is much smaller, around five. The common principle for both countries' local currencies is that they have high reliability. This critical element strengthens our research in order to understand the causes of this expansion and high reliability in recent years.

Local currencies are also a form of CCS in order to boost the local economy. According to Christian Thiel, the German Regiogeld is an attempt to replace euro as a medium of exchange in certain places in Germany (Thiel 2011). More specifically:

> Regiogeld (the German short form for regional money) is a special form of a community currency. It can be defined as a private monetary system with a regional validity and a non-profit-agenda which is accepted by multiple participants. It usually occurs as voucher and is provided with a demurrage (negative interest). This constant loss in value (5–12% per year) is either realized via certain tokens which have to be purchased and glued on the vouchers every 3 months or via the chargeable replacement of the vouchers every (3 up to 12) months. (Thiel 2011, p. 17)

The most developed regional currency in Germany is the Chiemgauer, which was introduced in 2003 in Prien am Chiemsee, Bavaria (Warner 2014). The currency was developed by Christina Gelleri and six students (Community

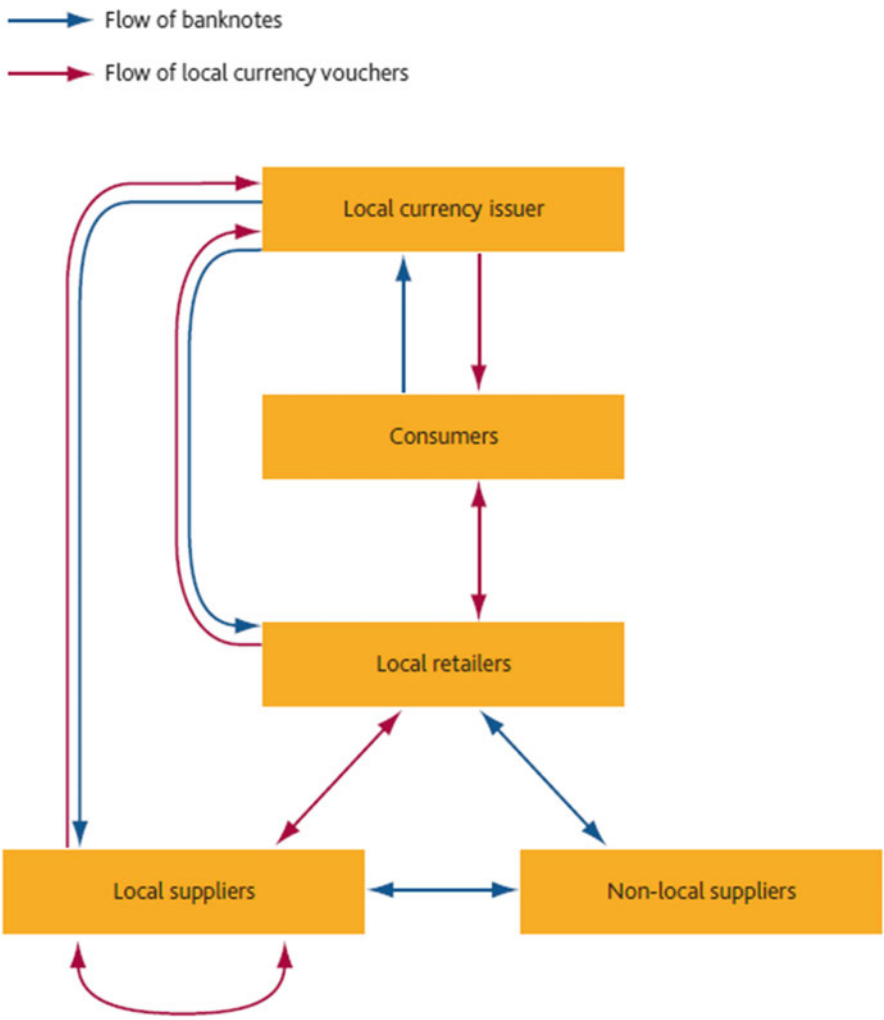


**Fig. 1** Illustrative example of local currency circulation. Source: Naqvi and Southgate (2013, p. 6)

Currency Knowledge Gateway 2016). The main characteristics of Chiemgauer are the following:

> The value of one Chiemgauer is one Euro. Other nominations are 2, 5, 10, 20 and 50 Euro. The Chiemgauer note has 14 security features like ultra-violet colours, imprinting of the logo, watermark, copy-proof colours, individual serial number. Chiemgauer notes are ageing. The demurrage-fee (=negative interest rate) is 2% per quarter or 8% per year. This is not a 'must' for regional currencies but the Chiemgauer community has decided to establish a money that never slows down in circulation. The advantage is that everybody keeps money going. (Gelleri 2009, p. 69)

**Table 3** Local currencies in the European Union

| Country | Currency name | Type | No. | Status | Reliability | Development |
|---|---|---|---|---|---|---|
| Germany | Regiogeld | Local currency | 30 | Plateau in number of systems | High | First one in 2003, followed by rapid growth; currently consolidating |
| The United Kingdom | Transition currencies | Local currency | 5 | Growth in number of systems | High | Instigated 2007; initial growth; then plateauing for learning, with current expansion and experimentation |

Source: Seyfang and Longhurst (2013, p. 70)

The idea behind the Chiemgauer is the theory of Silvio Gesell about money declining in value over time. Professor Jonathan Warner explains Silvio Gesell's theory as follows:

> To correct what he saw as an inequality between sellers of goods and holders of money: sellers can sometimes be forced into selling their goods cheaply, as the quality deteriorated (think fresh produce left at the end of the day in a market); whereas holders of money face no such imperative. Therefore, he argued, money should decline in value over time, by means of a tax or price (demurrage) paid for holding on to the money. Logistically, the easiest way to do this was to require that the value of the note be maintained by affixing a special stamp on the back. (Warner 2014, p. 495)

The Chiemgauer is a local currency with high reliability. It is characteristic that in 2003, the first year of circulation, the total members of the currency were 235 and in 2014 were 3889 (Gelleri 2015). The augmentation of usage for the Chiemgauer is highly related with its velocity in relation to the euro, as we can see in Fig. 2.

From Table 4, we can see the success of the local currency, as it has increased the number of private consumers, producers and associations and communities from 2003 to 2014. According to the latest available data in 2014, the total number of users is 3889. Furthermore, we observe the increase of local currency in circulation in euros from 10,000 in 2003 to 694,511 in 2014. Total revenue in euros increased from 75,873 at 2003 to 7,426,269 € in 2014. The above statistics show the high importance of the Chiemgauer for the local economy and local companies. On the other hand, Deutsche Bundesbank criticises the role of local currencies in the German economy. Firstly, Deutsche Bundesbank mentions the miracle at the town of Wörgl in Tyrol, Austria, in 1932. Mayor Michael Unterguggenberger introduced a money experiment in order to overcome the implications of recession for the local economy during this period. The common key point of new money in Austria during this period with the Chiemgauer today is the decline of its value over time. The loss of purchasing power overtime augmented consumption rather than savings. The results were positive as unemployment fell, tax revenues were augmented and the rhythm of economic growth was increased. The experiment with the title 'Miracle of Wörgl' stopped in September 1933 as the Austrian Central Bank was losing its own

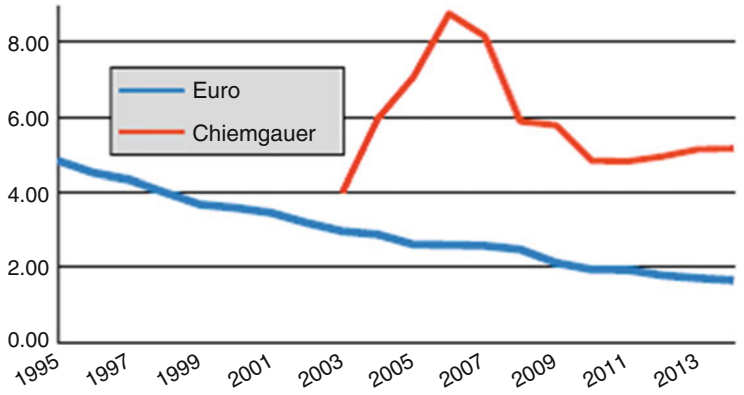


**Fig. 2** Velocity of Chiemgauer in relation to the euro. Source: Gelleri (2015, p. 1)

monopoly in issuing bank notes (Deutsche Bundesbank 2013). According to Deutsche Bundesbank, local currencies have three main negative consequences:

1. The inbuilt erosion of the value of the money because the Chiemgauer, for example, loses around 8% of its value over a year
2. Limited number of traders who accept the currency
3. Loss of efficient division of labour because day-to-day goods and services are supplied not by the provider best placed to produce them but by one's neighbours (Deutsche Bundesbank 2013)

Moreover, we will analyse the role of local currencies in the United Kingdom and their implications to the local and national economy. The most developed currency in the United Kingdom is the Bristol Pound, established on 19 September 2012. The Bristol Pound is the local currency of Bristol and has the following features:

1. The United Kingdom's first city-wide local currency
2. The first to have electronic accounts managed by a regulated financial institution
3. The first that can be used to pay some local taxes
4. £B1 equal in value to £1 sterling
5. Paper Bristol Pounds
6. Bristol Pound account with any mobile phone by using simple TXT2PAY SMS payment system or over the internet (Bristol Pound 2016a)

The circulation of the Bristol Pound is strongly related to Bristol Credit Union. This organisation has the following jurisdictions:

1. Hold and manage all Bristol Pound member accounts
2. Hold sterling deposits and manage the process of exchange between Bristol Pounds and sterling
3. Help ensure that disadvantaged people have access to this new financial service and a stake in its development (Bristol Pound 2016b)

**Table 4** Statistical data related to the Chiemgauer

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of private consumers | 130 | 380 | 700 | 1097 | 1337 | 1713 | 1899 | 2230 | 2470 | 2573 | 2769 | 3036 |
| Number of producers | 100 | 250 | 380 | 540 | 631 | 607 | 587 | 602 | 593 | 633 | 627 | 593 |
| Number of associations and communities | 5 | 15 | 50 | 98 | 158 | 179 | 200 | 217 | 233 | 248 | 253 | 260 |
| Total number of users | 235 | 645 | 1130 | 1735 | 2126 | 2499 | 2686 | 3049 | 3296 | 3454 | 3649 | 3889 |
| Chiemgauer purchase (in euros) | 68,286 | 198,991 | 349,917 | 560,283 | 875,737 | 1,073,642 | 1,304,994 | 1,501,145 | 1,737,584 | 1,879,372 | 2,095,626 | 2,159,927 |
| Chiemgauer reconversion (in euros) | 58,286 | 175,662 | 333,138 | 491,541 | 766,430 | 977,566 | 1,239,260 | 1,333,067 | 1,734,213 | 1,778,481 | 2,174,909 | 1,985,931 |
| Local currency in circulation (in euros) | 10,000 | 33,329 | 50,108 | 118,850 | 165,648 | 261,724 | 327,458 | 495,536 | 498,906 | 599,797 | 520,514 | 694,511 |
| Of this: electronic circulation (in euros) | – | – | – | 17,141 | 62,536 | 114,131 | 188,305 | 308,389 | 322,168 | 406,442 | 360,227 | 540,000 |
| Total revenue (in euros) | 75,873 | 306,140 | 699,834 | 1,273,370 | 2,304,571 | 2,982,339 | 3,974,927 | 4,993,500 | 5,585,021 | 6,137,000 | 6,826,105 | 7,426,269 |
| Total cost of producers (in euros) | 3030 | 16,150 | 24,056 | 38,071 | 58,368 | 88,031 | 107,336 | 127,254 | 133,830 | 148,688 | 151,959 | 164,887 |
| Total cost of producers as a percentage of revenue (%) | 3.99 | 5.28 | 3.44 | 2.99 | 2.53 | 2.95 | 2.70 | 2.55 | 2.40 | 2.42 | 2.23 | 2.22 |

Source: Toth (2001, p. 74) and Gelleri (2015, p. 1)

In 2013, the Bank of England focused on the role of local currencies in regard to the monetary stability objective. According to the Bank of England, local currencies are similar to vouchers, but some look like banknotes. Table 5 summarises the current situation of instrument issuers in the United Kingdom.

From Table 5, we understand that is vital for the role of a currency to have the legal tender status. The Bank of England explains that only banknotes issued by the Bank of England have legal tender status. The definition of legal tender has as follows:

> The term 'legal tender' simply means that if a debtor pays in legal tender the exact amount they owe under the terms of a contract, and the contract does not specify another means of payment, the debtor has a good defence in law if he or she is subsequently sued for non-payment of the debt. In ordinary day-to-day transactions, the term 'legal tender' has very little practical application, as whether or not an instrument (be it a banknote or local currency voucher) is used as a means of payment is subject only to the mutual agreement of the parties to the transaction. (Naqvi and Southgate 2013, p. 5)

**Table 5** Summary of the status of Bank of England notes, Scottish and Northern Ireland notes and UK local currencies

| Instrument issuer | Bank of England banknotes | S&NI banknotes | Local currencies |
|---|---|---|---|
| Legal status | Legal banknotes—authorised by Bank Charter Act 1844 | Legal banknotes—authorised by Banking Act 2009 | Similar legal status to vouchers or electronic balances |
| Legal tender status | Legal tender in England and Wales | Not legal tender | Not legal tender |
| Value in circulation | £54.2 billion | £6 billion | Less than £500,000 |
| Population of area | Whole of the United Kingdom (63.7 million) | Scotland (5.3 million) and Northern Ireland (1.8 million) | A local area or high street; the largest scheme currently targets population area of one million |
| Risks to holders of the instrument | Instrument is a claim on the central bank; hence, no exposure to market or credit risk | Banking Act 2009 introduced the ring-fencing of banking assets and guaranteed central bank settlement at all times; hence, level of credit protection comparable to Bank of England note users | No mandated credit protection for paper-voucher users. While existing schemes have generally issued vouchers that are backed one-for-one with sterling, the funds are not legally ring-fenced |
| Anti-counterfeiting measures | Use of robust security features and a programme of education on how to correctly identify genuine banknotes | Security features (the strength of which is selected by the issuer) and education are often used | Security features (the strength of which is selected by the issuer) and education are often used |

Source: Naqvi and Southgate (2013, p. 9)

**Table 6** Scale of some UK local currency schemes

| Paper instrument | Value in circulation | Population of area |
|---|---|---|
| BoE notes | £54.2 billion | 63.7 million |
| S&NI notes | £6 billion | 7.1 million |
| *Bristol Pound* | *£250,000* | *1 million* |
| Brixton Pound | £100,000 | 300,000 |
| Lewes Pound | £20,000 | 17,000 |
| Totnes Pound | £8000 | 15,000 |
| Stroud Pound | £7000 | 13,000 |

Source: Naqvi and Southgate (2013, p. 6)

On the other hand, the legal status of a voucher differs from a banknote:

> . . .vouchers represent a pre-payment for goods or services from a specified supplier (or group of suppliers) and do not legally entitle the holder with the right to redeem the voucher. While the legal status of local currency vouchers is similar to traditional single-retailer vouchers and multi-retailer vouchers, such as book or theatre tokens, local currency vouchers offer a different user proposition. They may be used to purchase any good or service from participating retailers within a particular area, and can be recirculated by the retailer to purchase supplies (or given out as change items). While local currencies may have more functions than a traditional retail voucher, they do not have the full functionality of a banknote. (Naqvi and Southgate 2013, pp. 5–6)

The expansion of local currencies (less than £500,000) is limited in comparison with Bank of England banknotes (£54.2 billion) and Scottish and Northern Ireland banknotes (£6 billion). Moreover, local currencies concern a population area of 1 million in relation to 63.7 million for the entire United Kingdom. From Table 6, it is crystal clear that the Bristol Pound is the most developed local currency of the four, with a value in circulation of around 250,000 according to the Bank of England (Bristol Pound 2016c).

Table 7 presents the employment rates for the United Kingdom and the Core Cities from September 2011 to September 2015. According to the latest available data, Bristol has the highest employment rate among the UK Core Cities and above UK average. Bristol has also augmented the employment rate by 3.3%. At the same time, the claimant[1] rate in January 2016 was 1.7%, which means below of the UK average of 1.9%. The claimant rate of Bristol is the lowest among the Core Cities.

Moreover, Bristol seems to have a positive path for business activity and new business start-ups. Table 8 shows that in 2015, in Bristol there were 20,615 active businesses with a real growth from 2010 to 2015 of 14.5%. This rate is the third highest after Manchester and Leeds of any large urban area outside London. Furthermore, Bristol has the highest business density (68.5%) of the British Core Cities and 4237 new business start-ups, which is the highest annual total from 2008. It seems that a strong correlation exists among the circulation of the Bristol Pound and the development of the local economy (Bristol City Council 2015).

[1]On Nomis 'Claimant Count': now the number of people claiming a Jobseeker's Allowance (JSA) plus those who claim Universal Credit who are out of work.

**Table 7** Employment rates for the United Kingdom and the Core Cities, September 2015

| | Employment rate | | Difference |
|---|---|---|---|
| Area | September 2011 | September 2015 | September 2011–September 2015 |
| *Bristol* | *72.6* | *75.9* | *3.3* |
| Birmingham | 57.3 | 62.6 | 5.3 |
| Cardiff | 66.3 | 68.2 | 1.9 |
| Glasgow | 62.3 | 66.7 | 4.4 |
| Leeds | 68.5 | 74.3 | 5.8 |
| Liverpool | 58.9 | 59.4 | 0.5 |
| Manchester | 58.3 | 61.0 | 2.7 |
| Newcastle | 61.2 | 65.2 | 4.0 |
| Nottingham | 56.9 | 63.5 | 6.6 |
| Sheffield | 65.8 | 71.0 | 5.2 |
| The United Kingdom | 69.8 | 73.2 | 3.4 |

Source: Bristol Economic Briefing (2016, p. 2)

**Table 8** Business activity and new business start-ups

| | Number of business units | | | Real growth 2010–2015 | Density per 1000 WAP reported 2015 |
|---|---|---|---|---|---|
| | | 2015 | | | |
| Area | 2010 | Reported | Corrected | | |
| *Bristol* | *17,350* | *20,615* | *19,871* | *14.5* | *68.5* |
| Birmingham | 32,485 | 36,720 | 35,394 | 9.0 | 52.1 |
| Cardiff | 12,030 | 13,900 | 13,398 | 11.4 | 57.9 |
| Glasgow | 20,355 | 22,960 | 22,131 | 8.7 | 54.7 |
| Leeds | 26,775 | 32,605 | 31,428 | 17.4 | 64.5 |
| Liverpool | 13,565 | 15,355 | 14,800 | 9.1 | 47.4 |
| Manchester | 17,360 | 22,170 | 21,369 | 23.1 | 60.4 |
| Newcastle | 9130 | 10,150 | 9783 | 7.2 | 51.2 |
| Nottingham | 9830 | 10,725 | 10,338 | 5.2 | 49.0 |
| Sheffield | 16,495 | 18,040 | 17,389 | 5.4 | 48.8 |
| Great Britain | 2490 m | 2825 m | 2723 m | 9.4 | 70.9 |

Source: Bristol Economic Briefing (2016, p. 5)

## 4 Conclusions

The study of alternative currencies reveals a new reality for local and national economies. The complementary currency systems (CCS) is not a new phenomenon as LETS constitute a reality since the 1980s. But two major changes have given a new push to the attempts for alternative currencies. First is the development of technology that gives more trade opportunities for participants in market systems. The most characteristic example is Bitcoin, which constitutes a peer-to-peer money system. The weakness of this case is the absence of a central authority for the confrontation of fluctuations (Boonstra et al. 2013). As we saw, local currencies are

driven by technology even if they use still the traditional way of issuing vouchers-banknotes. On the other hand, the manifestation of the world economic crisis has led to challenges with powerful currencies such as the euro, and the cohesion of the eurozone (Koutsoukis and Roukanas 2014).

We focused on local currencies as a part of the complementary currency systems (CCS) in the European Union. Local currencies are developed especially in Germany and the United Kingdom. The Chiemgauer in Prien am Chiemsee, Bavaria, and the Bristol Pound in Bristol are the most successful examples of local currencies in both countries. Deutsche Bundesbank and the Bank of England have pointed out the limitations, risks, legal status and possible positive impacts of local currencies in local economies. The Chiemgauer and Bristol Pound seem to have positive consequences to local economies, especially to business activity. In conclusion, a further study of the correlation between local currencies and local economies will reveal to what extent local currencies can present an opportunity to overcome stagnation of the European economy.

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