THE IRREPLACEABILITY OF CASH AND RECENT LIMITATIONS ON ITS USE: WHY EUROPE IS OFF THE TRACK [1]

International cash conference on
"The usage, costs and benefits of cash revisited"
Deutsche Bundesbank, Dresden (D), 15-18 September 2014

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The paper questions whether cash payments, in any post-industrial economy, are merely a barbarous relic of the past and whether they should be replaced by e-money. Our analysis aims to demonstrate that, being faster and more 'expendable' than bank transfers, cheques and other forms of credit, liquid money represents a natural drive towards economic flexibility and growth. From a behavioural perspective, cash resources entail reassuring as well as emotive components, which have ancestral origins and cannot be simply rooted out by law. Another major critical issue in today's academic and political debate is the alleged contribution of cash transactions to avoiding capital traceability. In the same way as not every hard-copy letter can necessarily be tracked, there is no specific economic need for limiting cash payments. Nevertheless, in several European countries (Belgium, Italy, Portugal, Slovakia, and Spain) a clear trend has emerged towards setting a limit to the use of cash, based on the wrong assumption that it can curb capital flight and tax fraud. Instead, not only are these upper cash ceilings - mostly introduced in crisis year 2012 - unlikely to have a negative impact on consumption (depending also on economic and local factors), but they may also cause panic waves in times of economic trouble. These phenomena are all the more plausible given the imperfect substitutability of cash by other payment instruments. Bad communication by economic bodies combined with the increasing taxation of intangible financial assets (see: the Tobin Tax) and the risk, albeit occasional, of haircuts on bank accounts (see: Cyprus banking crisis) do not represent a coherent marketing strategy in support of e-money and dematerialized payment instruments. Upper limits on the use of cash, therefore, threaten economic agility and are also likely to have recessionary repercussions. However, as the Swedish case shows, accepted means of payment may be restricted by agreement, since no physical or juridical person should be obliged to accept cash unlimitedly, provided this condition is clearly stated before closing the deal.

JEL classification: F38, P44
JEL keywords: e-money, cash use restrictions, money, payments system

1. Introduction

Are cash payments perhaps a barbarous relic in post-industrial economies? They certainly are. Should cash therefore be progressively replaced by e-money? Despite

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[1] The author would like to thank Simona Cain, lecturer in English for economists at the Faculty of Economics, Università della Svizzera italiana, for her precious editing work.

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widespread criticisms, it definitely should not. This is precisely what this paper aims to prove, by answering:

1) why paper money and cash payment instruments are necessary to maintain a primary source of economic growth;
2) why e-money is used particularly by banking institutions, while economic subjects prefer to adopt rather diversified payment instruments;
3) why the abolition of cash transactions is not the proper solution to reduce capital flight and tax fraud.

More precisely, the paper has been conceived as an economic memorandum, to prompt a thorough investigation of this monetary issue from an academic and political perspective. To this end, the approach we have adopted is mostly analytical, even though statistical data have also been used to empirically corroborate the theoretical findings. The fact that cash is irreplaceable has to be proved mainly on an inductive basis by indicating the deep-seated reasons that make it so. Money and, especially, material payment instrument namely entail an emotive component, which must be taken into account while weighing pros (e.g. benefits) and cons (e.g. costs) of using tangible payment methods.

To put it differently, nowadays cash and e-money are imperfect mutual substitutes, although particularly innovation-friendly societies like Sweden may have opted for nearly completely banning cash payments in practice ("Cash is used relatively infrequently in Sweden, compared with other countries, while cards are used to a great extent" (Sveriges Riksbank 2013, 7)). Money is therefore not only a means of payment as well as a unit of account, but also a "symbol" or "sign" (Smelt 1980, 204) meaning "national identity" (Maurer 2006, 27). Generally, symbols and signs are representations of material forms and would lose most of their iconic meaning if they were a mere abstraction. If psychological explanations were the only obstacle to restricting or even abolishing cash payments, we could decide to ignore them. On the contrary, the paper sets out to demonstrate why cash remains an irreplaceable payment method, which, if limited or eliminated by law, could have detrimental consequences on the wellbeing of the economy.

2. Advantages from cash (that barbarous, but necessary relic)

Paradoxically, paper money and coins – the main instruments for making cash payments – seem to have turned into an archaism in the 20th century, while remaining at the same time indispensable.

Not surprisingly, money is increasingly regarded by the banking system as a dematerialized payment instrument, which enables financial institutions to make and receive payments nearly instantly. And there would be nothing wrong with this, if money were still conceived as a quantum of physical goods, as was the case centuries ago. More precisely, the vehicular and dematerialized essence of modern money is particularly true of, and accepted by, financial systems, as the following quotation from the Bank for International Settlements shows: "[S]ettlement of a securities trade involves the transfer of the securities from the seller to the buyer and the transfer of funds from the buyer to the seller. Historically, securities transfers involved the physical movement of certificates. However, in recent years securities transfers have increasingly occurred by book-entry" (Bank for International Settlements 1992, 11). However, individual subjects, who are not frequently involved with banking and financial procedures, prefer to use material money instruments. The Deutsche Bundesbank has highlighted that cash payments are still predominant and still represent 53% of all transactions, although between 2008 and 2011 e-money has registered an increase of 6% (Deutsche Bundesbank 2012, 9). How do we explain this? There are emotive components to the particular statistical evidence, and they play a significant role, especially with concepts like "money", "savings" and "wealth". More precisely, non-financial private subjects like residents, retirees, savers and small investors are aware that modern money is frequently dematerialized and savings are often held as stock/bond shares; yet they are prone to hold (at least) a portion of their savings in the form of physical assets. This mindset, or *modus cogitandi*, has ancestral roots going back, on the one hand, to precious metals (gold and silver), which were used until the breakup of gold standard regimes in the 1930s as payment instruments and store of wealth; and on the other hand to subliminal epitomes of money and wealth. A memorable fictional example of these complex psychological or emotional components may be seen in the comic-book character Uncle Scrooge, Walter Elias "Walt" Disney's ingenious creation. These apparently "soft" elements showing why money is often still conceived as a tangible asset are nonetheless crucial in predicting and understanding the impact of any economic reform. In the same way as fixed exchange-rate regimes like the currency-board system, dollarization, and monetary unification have an emotive impact on people's minds, which often present a sceptical attitude towards abolishing the national currency (cf. Dollarization and monetary unification) or deprive it from a significant part of its monetary sovereignty (cf. currency-board system), non-financial private residents will probably feel safer in thinking of money and economic wealth as a portfolio of coins, paper money, cheques, share/bond stocks, certificates of deposits, etc.

Besides rather emotive components supporting money in its material form, cash money represents a natural impulse towards economic flexibility and growth, because it is often much faster and easier to use than bank transfers, checks and other credit forms. There is no denying that vehicular money, generally used by banks and financial institutions to make payments, benefits from an even higher money velocity, which is ensured by the fact that bank money is almost instantly transferable from payer to payee. This procedure is facilitated by modern clearing and settlement systems, which have partially deprived payment instruments of their physicality. Nevertheless, if we think of economic wealth (and growth) we should always keep in mind that Gross Domestic Product (GDP) is the aggregation of consumption (C), investments (I), Government spending (G), and net exports (X - M):

$$Y = C + I + G + (X - M).$$

On the one hand, investments (I), government spending (G) and net exports (X - M) are mostly settled by means of several payment instruments, not necessarily represented by cash money. On the other hand, consumption (C), which is often not only the largest GDP component, but indeed the most psychological and pervasive one, is strongly influenced by the amount of disposable cash payments. It stands to reason that private residents will probably not buy goods and services unless they feel sufficiently (economically) safe. This perception of "economic safety" is particularly subjective and influenced by irrational as well as more rational components like disposable income. For instance, the change in the propensity to consume of German people after the reabsorption of high unemployment rates (2003 - 2005) in the wake of the *Agenda 2010* (2006 - 2013) has been motivated by a more pronounced perception of economic safety, which is also corroborated by statistical evidence like the GfK-Konsumklima-Index (Gesellschaft für Konsum-, Markt- und Absatzforschung e. V., 2014). But what is the link between "economic safety", consumption expenditure and cash payments? If we admit that:

- "economic safety" is directly interconnected with net disposable income;
- consumption rates are interlinked with economic and social factors, often striking a precarious balance;
- cash payment instruments are characterized by ancestral emotive components, which remind people of by-gone times when money and wealth were entirely material or even gold-bound;

then there is a clear relation between increasing "economic safety", soaring consumer spending and cash payments, the most common settlement method in several post-industrial countries like Germany:

$$\Delta\uparrow \text{"economic safety"} \Rightarrow \Delta\uparrow \text{consumption} \Rightarrow \Delta\uparrow \text{payment volumes (in cash too).}$$

Scientific research has sometimes evinced that the use of e-money leads to a higher degree of propensity to consume because, in people's minds, transfers of non-physical amounts of money are seen less as actual spending. That notwithstanding, readers should bear in mind that paper money and coins are (generally speaking) accepted worldwide, while the same cannot always be said of e-money and, more specifically, ATM cards or credit cards, as recent publications have highlighted (Drehmann, Goddhart, Krueger, Boldrin and Rose 2002, 216). Furthermore, cash payments are not subject to transaction fees the way e-money transactions often are (Migliaccio and Sirletti 2011). One additional drawback is worth mentioning: payments carried out electronically are often capped if they exceed a given contractual limit.

Furthermore, the concept of “payment finality”, which has been defined by the Bank for International Settlements (BIS) itself and has been dealt with in several publications (“[F]inality of payment” has acquired diverse meanings. In one sense, it has come to denote the irreversibility of the payment process, particularly in connection with insolvency. Otherwise, it has also been taken to signify the loss of the right to recover a mistaken payment. Finally, it has been used to mark the accountability to the payee/beneficiary by a bank instructed to pay to that payee/beneficiary” (Geva 2008, 633-634)), embodies two (slightly) different connotations depending on the non-physicality of payment instruments. In fact, private residents are fairly confident of having fully settled the outstanding amounts only when they have disbursed those amounts in cash. Obviously, this is equally true of e-money instruments, although these payment methods are perceived as less reliable in terms of “payment finality” inasmuch as the payer’s credit card details are revealed to the payee or has had negative experiences in terms of data theft. Indeed, if “economic safety” is a significant factor behind growing consumption rates, unsafe (or perceived as such) payment methods do in turn not stimulate consumption expenditure. Another observation with specific regard to the concept of “payment finality” has been highlighted in the following way: “only currency, which is legal tender, provides for an immediate final settlement of the transaction in which it is used. The other are linked to the payers’ bank accounts or credit lines extended by the card issuers. […] In the case of account-linked instruments the costs are generated by the credit verification, bookkeeping, and communication with the central operators of the system. Because of the cost structure, currency is still the dominating means of payment in small transactions, whereas the account-based instruments are used mainly for medium-sized and large transactions” (Shy and Tarkka 2002, 299). Interestingly enough, the dichotomy between “small payments” and “medium-large payments”, where the former usually pertain to individual non-financial subjects while the latter to financial (or, at least, more financialized) agents, can still be felt and is likely to characterize the near future too.

Nevertheless, as we have already seen, sometimes economists ignore or fail to give due consideration to psychological factors, which are at least as important. In the light of the previous reflections, it is possible to assert - even at the risk of exaggerating - that the abolition (or even limitation) of cash payment methods would have the same destabilizing effect as the demonetization of precious metals, which at the time of the gold standard (approximately 1870 - 1914 and 1925 - 1935: the classical and interwar gold standards, respectively) or the gold-exchange standard were often perceived as the key collateral to cover (paper) money issues. Nowadays, in the absence of gold-bound economic systems, cash plays the same role as precious metals did with respect to paper instruments: tangible payment methods are therefore, whether we like it or not, considered to be safer, at least by consumers. This finding is particularly true during economic crises, as recent empirical evidence demonstrates. In the same way as "between 1958 and 1962 the average U.S. gold loss increased sixfold to nearly $1.4 billion per year [and t]he U.S. gold stock declined by $6.8 billion or 30% as foreign countries converted dollar reserves into gold" (Bordo, Humpage and Schwartz 2006, 7) amid fears of economic instability caused by soaring US current account deficits, bank runs, arguably a thing of the past in post-industrial banking systems until Northern Rock collapsed in 2007, are the best proof of the fact that tangible payment methods, i.e. cash, are implicitly perceived as more reliable than intangible ones. In the case of the above mentioned bank savers asked in fact to withdraw their deposits and not to transfer them to another bank account: a far from negligible event indeed. Interestingly, this circumstance does not go unnoticed in times of economic turmoil, while it is rather buried in oblivion in times of widespread "economic security".

There is another commonplace worth mentioning in the present context. The economic community easily falls prey to a prejudice, which consists in associating:

1) cash payment methods with "obsolescence";
2) non-cash payment methods with "modernity".

In the light of this, *Table 1* contains statistical data on the value of banknotes/coins as a percentage of GDP for selected non-EMU countries or country groups as compared to the Eurozone itself.

Table 1

Banknotes and coins in circulation: value as a percentage of GDP

	2008	2012	Change (%)
Euro Area	8.50	9.78	+1.28
Hong Kong SAR	10.88	14.79	+3.91
India	12.27	11.78	-0.49
Japan	17.17	19.26	+2.09
Russia	10.61	12.26	+1.65
Singapore	7.74	8.42	+0.68
Switzerland	9.13	10.93	+1.8
United States	6.05	7.20	+1.15

Source: Bank for International Settlements (2013, 439)

For instance, Singapore, Switzerland and the United States of America are respectively the fourth, fifth and seventh most relevant countries in terms of GDP per capita (World Bank 2014), which is considered not only the principal measure of economic wealth, but also a good approximation for (high/low) living standards and, conceivably, economic modernity and development, too. If notes and coins had already become a thing of the past or, more specifically, were perceived by their users as 'barbarous relics', how could the amounts of cash instruments still circulating in those (modern post-industrial) countries be explained? They cannot be. In other words, there seems to be no *a-priori* 'one size fits all' answer to the question of which payment instrument(s) to use in which country.

Now, if economists and politicians fail to fully recognize the economic and psychological role of cash payments, paper money and coins will become a truly anachronistic payment method, and lose any remaining *raison d'être*. In the light of this, the trend towards cash payments limitations - especially in the European Union

(EU) - is not only economically hard to explain, but also potentially detrimental to economic growth. As we have already seen, consumption expenditure (C) is often the largest component of the GDP relation: if the most common payment method in several EU countries, namely cash, becomes limited in use by law, then this measure is more than likely to have a negative impact on economic growth. *Tertium non datur*. Having thus analysed theoretically some key benefits of making cash payments, let us now investigate the main reasons behind this new trend to reduce cash transactions, and demonstrate why it is profoundly misguided.

3. The drawbacks of cash (that barbarous, but necessary relic)

A major target of criticism in today's academic and political debate is the alleged contribution of cash transactions to avoiding capital traceability. It goes without saying that cash payments are less controllable by public authorities than digital (e.g. electronic) transaction methods. But does this fact necessarily mean that preference for cash is to be denounced, denigrated, or suspected of facilitating illegal activities? Not so. In the same way as not every mail typology is easy to track down or retrieve, there is no specific economic need for limiting cash payments in order to allegedly ensure more traceability of (inter)national capital flows.

Nevertheless, if we think of cash payments as the German Finance Minister, Wolfgang Schäuble does, namely as "intransparent payment methods" (Ramthun 2012), we should ask ourselves why the majority of German citizens still use cash. Is it because German people prefer an "intransparent payment method" compared to a more traceable one? And if that were the case, why? If we adopted this outlook, we would forsake any accurate approach, to embrace a rather broad-brush one. Nevertheless, in several European countries (e.g. Belgium, Italy, Portugal, Slovakia and Spain) there seems to be a clear trend towards setting limits to the use of cash, based on the wrong assumption that it is, or might be, the only way to curb capital flight and tax fraud. As reported by the European Consumer Centre France (2014), several member countries of the European Union have introduced legal limitations to cash payments or set implicit restrictions on them deriving from daily practice.

Table 2

Cash payment restrictions in the European Union: an overview

Belgium	€3,000		1 January 2014
Bulgaria	BGN 10,000 (≈€5,112)		1 July 2011
Czech Republic	CZK 350,000 (≈€12,763)		1 January 2013
Denmark	DKK 10,000 (≈€1,340)		1 July 2012
France	€3,000 (residents and non-resident traders)	€15,000 (non-resident consumers)	1 January 2002
Greece	€1,500		1 January 2011
Hungary	HUF 1.5 million (≈€5,000) (legal persons)		1 January 2013
Italy	€999.99		6 December 2012
Portugal	€1,000		14 May 2012
Slovakia	€5,000	€15,000 (natural persons being not entrepreneurs)	1 January 2013
Spain	€2,500 (residents)	€15,000 (non-residents)	19 November 2012

<u>Source:</u> European Consumer Centre France (2014); Véber and Brosch (2013)

At first sight, there may seem to be no significant empirical evidence that member countries, which have decreed legal or practical limitations to cash payments, have been particularly subject to recent crisis episodes. In order to formulate a more precise analysis it may be useful to highlight those countries in *Table 2* whose GDP growth rates were down in 2013. In fact, 2013 is particularly emblematic, characterized as it was by a discordant economic evolution at the European level: some countries registered economic growth results, while other (weaker) ones did not benefit from those economic improvements. By doing so it appears that several countries still affected in 2013 by the economic and financial crisis have legally set a limit to cash payments. It would be preposterous and unscientific, we feel, to claim that precisely those cash limits are to blame for negative growth rates in those countries in 2013. Nonetheless, it remains a fact that the countries analysed, for which reliable data are available (European Consumer Centre France (2014)), have been affected by two different approaches (cash limitations *versus* unlimited cash usage) and negative/positive growth rates.

Curiously enough, the EU Directive 2005/60/EC is far less restrictive in terms of cash limitations, as confirmed by the upper limit set, namely 15,000 Euro (European Union 2005, 16). In fact, the European Central Bank (ECB) has often pleaded for adequately "weighting the measures proposed […] against the public benefits expected to be derived from them in order to ensure that the effects of those measures do not go beyond what is necessary for achieving the objective of combatting tax fraud and criminal activity" (European Central Bank 2013, 3). The same formulation has been incorporated in other official statements (European Central Bank 2012, 3) and, although it may sound like a standardized formula, the message is particularly clear: the fight against tax fraud and criminal activity is legitimate and an absolute necessity, provided it safeguards the main principles of liberalism, it does not endanger legal economic transactions, and does not criminalise cash holdings *per se* (Maxeiner and Miersch 2014), which are still the legal tender and have been used unrestrictedly as of very recently.

There is no doubt – if we are to judge the statistical weight of cash payments – that some tax frauds are perpetrated by making cash payments, although the flip side of using more e-money is cybercrime (Rising 2012). In this specific regard, it may not be coincidental that German people have a preference for ATM cards (e.g. *EC-Karte*) as compared to credit cards - 28% of total expenses are namely settled by making use of EC-cards while only 7% by using credit cards (Deutsche Bundesbank 2012a) –, because ATM cards have a pin code and are therefore seen as more secure. Nonetheless, this observation does not justify the resolution, apparently envisaged by the European Union, to limit or even abolish cash payments, on account of allegedly being used as an instrument to conduct illicit activities. Even admitting they are, they certainly are not the only one and, more importantly, not the root of all tax evasion or similar fraudulent activity. It would be simply illogical to claim that - since public authorities are powerless to prevent illicit transactions - the most common payment method in post-industrial countries must be restricted. Perhaps, if this decision had no detrimental repercussion on economic activities and growth, we could decide to adopt cash payments restrictions. But, as we have already seen, cash instruments are possibly a barbarous relic, but they are still necessary to stimulate consumption spending and, more generally, to allow people to decide which payment method they prefer. This last point, i.e. the freedom to choose – to borrow a felicitous phrase from Milton Friedman's legendary book title (Friedman and Friedman, 1979), is a true *condition sine qua non* in liberal societies, which cannot in any case be restricted without first holding a referendum allowing citizens to exercise their rights to vote on it.

Another negative consequence, which has not been mentioned before and is directly related to the aforementioned freedom to choose, is inequality in cash payments limitations. Clear evidence of the fact that Governments should sometimes avoid intervening in economic operations is provided by the French case, characterized by two different cash acceptance thresholds, namely €3,000 for fiscal residents in France and €15,000 for non-residents acting as consumers: the same disparity is true of Slovakia (cf. *Table 1*). In fact, there is no plausible economic reason to justify this decision, which explicitly discriminates French residents who are, after all, the main fiscal contributors to the French State budget. Why should they be subject to a more restrictive upper limit to the acceptance of cash payments compared to non-fiscal residents, while the latter, not being fiscally indictable in France, might be encouraged to engage in unlawful transactions? In truth, we would be hard put to come up with a credible explanation for such a policy. Maybe, public authorities have preferred to enable people travelling abroad to continue making payments in cash, because empirical evidence proves that the majority of travellers in several countries like Germany (Deutsche Bundesbank 2012b, 10) still prefer cash instruments. In any case, such measures are potentially recessionary and unquestionably unjustifiable from an economic viewpoint as well as in terms of freedom of choice.

Furthermore, there is no clear correlation either between cash limitations and more financial legality, as the German case (characterized by no cash thresholds and less tax evasion than in the Italian case despite restrictive cash acceptance prescriptions) clearly demonstrates. The point at issue is that cash payments are often judged with suspicion by public authorities and the media. In any democratic society, which the European Union has represented since its very foundation, there should be no *a-priori* suspicion towards licit preferences and, more specifically, transactions settled in cash. Italy is a prime example, where 90% of all transactions are settled in cash (Ardizzi and Iachini 2013, 5): older people but also traditional individuals have a clear preference for cash instruments, which should be accepted for what they are, namely a preference. The attempt by national Governments to impose decisions without the general approval of the population tends to end up fomenting social conflicts and generating distrust of public authorities, which is in no way affordable in the middle-to-long term. Even admitting that cash restrictions may reduce illegal transaction volumes, we do not believe that this 'one size fits all' approach is worth pursuing as a means to deter honest citizens and travellers from freely choosing their payment method and, more dramatically, from purchasing what they want at the price they are ready to pay or can afford (dampening therefore generalized economic growth)? We don't really believe so.

Therefore, public authorities should carefully weigh up whether:

1) to introduce cash limitations (Quarters 1 + 2);
2) to have no cash restrictions (Quarters 3 + 4);
3) to get people involved in the decision process (Quarters 1 + 4);
4) not to get people involved in the decision process (Quarters 2 + 3).

As shown in *Table 2*:

1) (no) cash restrictions combined with people's active involvement in decisions (1st quarter + 4th quarter) are characterized by democratic co-determination, which will not in any case lead to (negative) effects, already metabolized by the subjects involved (who have also participated in the decision process);
2) cash restrictions without people having been actively involved in the decision-making process (2nd quarter) are particularly risky and likely to have negative repercussions on consumption expenditure and (dis)trust levels in public authorities. Furthermore, endogenous economic shocks are also expected to occur, because national individuals might disagree with the resolutions taken and take individual measures to reduce the impact on their lives;

3) no cash restrictions without people having been actively involved in the decision process (3rd quarter) are neutral in terms of economic effects, because national citizens spontaneously and freely decide which payment method they will use.

Based on these observations, we claim that cash restrictions are not necessarily detrimental or likely to have a negative impact on the wellbeing of the economy. In fact, any potentially negative outcome of cash limitations is caused by failure to fit, or adjust, economic measures (e.g. the decision to restrict cash use) to the traditional behaviour and needs of the individual users (e.g. a marked preference for tangible payment instruments). In other words, there is no a-priori "right" or "wrong" judgement, only contextually well or badly designed economic measures.

Table 3

The matrix of (no) cash restrictions and (no) people's involvement in decision

	No cash restrictions	**Cash restrictions**
People's involvement in decision	**Co-determination (Q4)** – public authorities co-decide with national subjects that cash should continue to be used without limits; – no negative effects being already metabolized by the involved subjects.	**Co-determination (Q1)** – public authorities co-decide with national subjects that cash should be restricted in use; – no negative effects being already metabolized by the involved subjects.
No people's involvement in decision	**Neutrality (Q3)** – subjects spontaneously and freely decide which payment method they will use.	**Riskiness (Q2)** – endogenous economic shock; – reduction in consumption expenditure; – distrust of public authorities.

Source: own representation

An initial repercussion of the recent cash limitations in the Italian case, which is characterized by particularly high levels of cash payments ("The use of cash is still predominant: it has been estimated that in 2010 cash accounted for about 90% of all micropayments" (Bank for International Settlements 2012, 247)), has been highlighted by critical media. As empirical evidence demonstrates, consumption expenditure by Italian people has shrunk by 2.6% in 2013 (Organisation for Economic Co-operation and Development (2014)). Of course, this trend is mainly due to high unemployment rates, up from 8.2% in January 2004 to 13% in February 2014 (Istituto nazionale di statistica (2014)), political instability owing to four different Governments in less than three years[3] and, more generally, the economic and financial crisis, which still endures in some part of the European Union. Furthermore, we are firmly convinced that cash limitation of up to 999.99 € has added another source of economic distrust leading to an even more pronounced, drastic cut in consumer spending. It would be hazardous to assert that the correlation between these circumstances can easily be shown, because every economist and every management and marketing expert knows that consumption is a very sophisticated economic variable.

In fact, consumption expenditure is a consequence of several factors, which do not depend only on one's economic situation, but also on psychological and instinctive inputs, as marketing and behavioural researchers well know (Puto 1987). Upper cash limits are therefore likely to have put a stop to consumer spending, even when people may have had sufficient resources. Does this hypothesis imply that consumption expenditure have been also reduced to avoid capital traceability above the threshold of €999.99? And if so, does it mean that those people are likely to have been (now or in the past) involved in illegal activities, to the point of curtailing consumption expenditure to eschew more transparent payment methods? Not necessarily. Cash payments are in fact also a way to ensure more privacy. As we have already said, the consumption and purchase process is something very peculiar indeed, and is not merely the mathematical result of having sufficient disposable income. To be more precise, even a single variable in the entire buying process can be responsible for resolving not to purchase after all.

[3] Silvio Berlusconi (2008-2011), Mario Monti (2011-2013), Enrico Letta (2013-2014) and Matteo Renzi (2014 -) (Governo italiano - Presidenza del Consiglio dei Ministri, 2014).

Therefore, there are enough theoretical-analytical elements to claim that even upper cash limits may (have) prevent(ed) people with sufficient economic resources from making purchase decisions.

Concluding remarks

One main contention of this paper was to show why European countries that have recently adopted cash restrictions are off the track. As we have already seen, cash still plays a symbolic role in post-industrial societies, a role that becomes particularly visible in a situation of economic turmoil, characterized by generalized distrust in the banking and financial system (Moss 2013). Interestingly enough, "54% of all payments in the UK [are] made by cash [whose] use increased in the UK last year […]. This breaks the longer term trend of falling cash volumes year-on-year seen over most of the last decade. More people are turning to cash exclusively, possibly to help them monitor the amount they are spending on a day-to-day basis" (Payments Council, 2013). We clearly cannot predict whether this trend is set to continue, or even spill over to the majority of European countries.

At any rate, upper cash thresholds - mostly introduced in crisis year 2012 - are not merely likely to have a negative impact on consumption depending also on conjuncture and local factors, but they may also cause panic waves during economic turmoil. From a behavioural perspective, cash resources entail reassuring as well as emotive components, which have ancestral origins and cannot be simply rooted out by law. These phenomena are all the more plausible in the light of the imperfect substitutability of cash resources by other payment instruments. In fact, bad communication by economic bodies combined with the increasing taxation of intangible financial assets (cf. the 'Tobin tax') and the (though occasional) risk to be subject to haircuts on bank accounts (cf. Cyprus banking crisis) do not represent a coherent marketing strategy in support of e-money and dematerialized payment instruments. Upper limits on the usage of cash can therefore become a great menace to economic agility and are also likely to have recessive repercussions. However, as the Swedish case tells us, accepted means of payment may be restricted on a contractual basis, since no physical or juridical person should be obliged to unlimitedly accept cash, if this condition is clearly stated before closing the deal. What remains nonetheless true is that:

1) trend reversals in terms of cash usage;
2) high volumes of daily transactions still settled in cash;

provide clear evidence for us to infer that several, or even most, people are not prepared to abandon cash payment methods. If Governments were to try to modify people's mentality by imposing cash restrictions by law, citizens would be inevitably forced to accept them, but fraudulent people will 'structure' transactions, namely "break[…] down large quantities of cash into amounts which will fall under the […] cash transaction reporting threshold" (Australian Transaction Reports and Analysis Centre 2008, 9) while common citizens will be *de facto* discouraged (at least under specific economic conditions) from purchasing.

No top-down cash limitation will therefore achieve fruitful economic results. On this basis, it appears that the only solution to avoid these damaging consequences is to wait and see whether cash payments will be abandoned voluntarily, i.e. by decision of the payers themselves. Yet, one could argue that this sort of outcome might entail the same (emotive as well as economic) risks as in the case of cash limits fixed *ex lege*. The profound difference would be that, by relinquishing cash payment methods voluntarily, people would have already metabolized the implications of this decision, which is evidently not true for any top-down resolution.

Finally, let us look a little closer at a particular observation, namely the fact that the American approach to cash payments (where "small-value transactions" (Bank for International Settlements 2003, 438) are particularly often settled in cash) cannot be necessarily adapted to the European case. In fact, the US is notoriously characterized by higher labour flexibility as well as mobility, which indirectly implies less need for cash payment methods and a more pronounced preference for e-money (greater ease and convenience). In turn, the American society is more dynamic than the European one, because of its more recent historical roots and higher propensity for innovation. Thus, member countries of the European Union should find the most appropriate mix, or balance, between e-money, which is becoming undeniably more relevant, and more traditional payment methods, which should not eliminated or restricted by law. Claiming that use of cash should be legally regulated to prevent tax frauds and illicit activities is no more plausible than asserting that people's phone calls should be indiscriminately intercepted to combat terrorism… . By the way, are we sure it isn't happening already?

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