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Coping with People's Inflation Perceptions During a Currency Changeover

Thomas A. Eife and
W. Timothy Coombs

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Thomas A. Eife
W. Timothy Coombs*

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ABSTRACT

The gap between actual and perceived inflation is one of the more unexpected consequences of the euro changeover in January 2002. In this note we argue that this gap was caused by a lack of preparation and experience of the authorities to appropriately communicate with the public during the changeover. Using principles of crisis communication we identify the mistakes made and give policy recommendations for future changeovers.

Keywords: crisis communication, transformative explanation, perceived inflation, euro changeover

JEL Classification: E50, E60, Y80

* Eife: University of Heidelberg, eife@uni-hd.de, Coombs: University of Illinois, wtcoombs@iu.edu

1. INTRODUCTION

An unexpected consequence of the euro changeover in January 2002 was the intense discussion among the European public about the changeover's impact on prices. In a survey conducted on behalf of the European Commission (Eurobarometer Flash 2002a) 11 months after the changeover, more than 80 percent of the respondents had the impression that the changeover triggered a rise in prices. The gap between actual and perceived inflation widened considerably.

The changeover's actual impact on prices is minor and cannot explain people's perceptions. Eurostat (2003) estimates that of a total HICP inflation of 2.3 percent in January 2002, the changeover might have contributed between 0.12 to 0.29 percentage points. Only a few sectors experienced a significant impact. The services sector is the most prominent example where some price indices increased by around 3 percent when the euro was introduced.

Interestingly, the actual impact on prices cannot be found in all of the 12 participating countries and despite this, people's perceptions of a significant price rise is relatively uniform across all countries. In the Eurobarometer survey mentioned above no country is exempt from the feeling that the conversion was done to the detriment of consumers. The Netherlands (94%) and Italy (91%) are the countries where the feeling was the most strongly expressed and Luxembourg (62%) and Finland (63%) are the countries where the survey finds the smallest percentages. Sometimes it is argued that people's perceptions might have led to the noticeable reluctance to make major purchases and in general to consumers' purchasing restraint in the aftermath of the changeover (Bundesbank 2003).

The perceived impact and the related issue of perceived inflation are well documented and several explanations have been suggested for this phenomenon (e.g., European Commission (2005), European Central Bank (2005), Fluch and Stix (2005), Del Giovane and Sabbatini (2005)). One explanation is that people continue to use reference prices in the old currency. When comparing new euro prices with old reference prices, people tend to hold the changeover responsible for any price increase they observe and tend to ignore that prices have increased in the years before the changeover as well and that there is not necessarily a causal relationship between the changeover and the price changes.

A different explanation of this phenomenon starts with the observation that most of the items that increased are frequently bought items (such as restaurant services). Based on the work by Kahneman and Tversky, it is argued that consumers perceive price changes for goods they buy more frequently more powerfully than for goods they buy less frequently. Also, price increases are perceived more powerfully than price reductions (Burgoyne, Routh and Ellis 1999 and Brachinger 2006).

A third explanation is given by Traut-Mattausch et al. (2004) who argue that before the changeover people held strong expectations that the euro would bring about price increases and that these expectations influenced people's opinion and judgment of the impact after the changeover. If people expect price rises, they are more likely to perceive them.

A salient feature of the discussions about the perceived impact is that the question of how the perceived impact can be avoided is barely addressed. None of the explanations above leave room for policy; the perceived impact appears as something policy makers cannot do much about – an unavoidable side effect of a currency changeover.

Whatever the reason for the strong perceived impact, people are making a mistake when they perceive the changeover to have had a strong impact and good policy should be able to prevent people from getting such false impressions. Rather than an unavoidable side effect, this phenomenon is an example of a severe crisis caused by the inability of the authorities to properly communicate with the public during the changeover.

In this note, we will use principles of crisis communication to identify the mistakes made and to provide policy recommendations for future changeovers. The most critical mistakes made during the changeover in 2002 are (1) lack of proper preventative crisis communication, (2) a weak initial response, and (3) lack of a strategic response. In this note we will focus mainly on Germany. There are many lessons to be learned and with respect to the perceived impact, Germany is representative. We would like to emphasize that the severity of the perceived impact was unexpected and surprising for all parties concerned. As researchers we have the benefit of hindsight. Our point here is not to put blame but to use the experience we made to learn for future changeovers.

In the next section we will describe the situation in the months around the changeover. First signs of an oncoming crisis surfaced already several months earlier when consumers expressed concerns that the changeover would bring about price increases. The crisis then culminated in calls for consumer strikes around six months after the changeover. In section 3, we will analyze the crisis and provide policy recommendations. Concluding remarks in section 4 close this note.

2. DESCRIPTION OF THE SITUATION

In the months before the changeover, there was an extensive discussion in the German public and the media about how firms might take advantage of the changeover and increase prices. Many people feared that they would be worse off after the changeover. In a survey conducted 18 months before the changeover, more than 50 percent of the respondents feared that the changeover would lead to price increases. In later surveys, this number increased and reached 67 percent three months before the changeover (Eurobarometer Flash 2001).¹

With the introduction of euro coins and banknotes the discussion of price increases resurfaced and within a few days after the changeover about everyone had a story about a restaurant or hairdresser that doubled its prices when converting into euros. Fuelled to some extent by media reports, the impression that the changeover led to considerable price increases became widespread. The increase in prices for tobacco, insurance, electricity and gasoline – all due to tax increases – and higher administered prices (parking fees, public transportation) in many municipalities contributed to this impression.

In a joint study, the German statistical office and the Bundesbank (Bundesbank 2002a, Buchwald et al. 2002a) documented the impact already in March 2002. This document is part of a project both institutions started nearly two years earlier to explore the effects of the euro changeover on price setting behaviour. Considering that the document was published already a few weeks after the changeover, it is remarkably detailed.

In May 2002 the German minister of finance was reported to “admit” that prices in some sectors have increased (Economist 2002). In light of the earlier publication by the German statistical office and the Bundesbank, the word “admit” is surprising but it nicely illustrates

¹ The European average was 73 percent. In Italy and France (both 80 percent), the concerns were most widely expressed and people in Austria appeared to be the least worried, but still, 58 percent expressed concerns.

people's sentiment that the authorities initially tried to cover up the prices increases and that it was only after the public outcry that they started to admit "failures".

The media heavily criticized the German statistical office for producing insufficient price statistics that downplay the true cost of living (Focus 2002). The euro was renamed "teuro" which is a play on the German word "teuer" meaning dear or expensive and politicians were quick to join the discussion. The German chancellor openly supported the protest and the Minister of Consumer Protection invited the media and representatives from the retailing sector for an "anti-teuro-summit". The minister also started a web site where people could file complaints (Engels 2003).

In early summer, a chain letter started circulating calling for consumers to stay home on July 1st 2002 to boycott retailers and service providers. This call for a strike was also taken up by some parts of the media. The interesting aspect of this event is that the German Association of Consumer Organization criticized the boycott on the ground that it is not helpful to discredit entire industries for the wrongdoings of some of its members (vzbv 2002).

In the months following the changeover domestic demand declined. Revenues in the restaurant sector dropped by around 14 percent (in real terms). The German Restaurant and Hotel Association called 2002 the "worst year in decades" (Engels 2003). It would be interesting to estimate the costs of the changeover in terms of lost GDP growth.

3. LESSONS FROM COMMUNICATION PRINCIPLES

In this section we will analyze the crisis and provide policy recommendations for future changeovers. A useful framework for analyzing a crisis is along the three stages prevention, response and learning. Part of the prevention stage is to prepare for a crisis, identify possible crisis risks and to take actions if signs for a looming crisis appear.² Prevention will be discussed in section "pre-changeover communications" below. The second stage (response) is discussed in the section "post-changeover communications". Writing this paper is part of the third stage, the learning stage, where experiences from past crisis are collected and analyzed in order to improve prevention and response in the future.

3.1 EURO OBSERVATORIES

A central principle of crisis communication states that an organization must speak with a single voice in order to make communication during a crisis effective. As the previous section has shown, several government agencies (ministries, central bank(s), statistical office(s)) communicated with consumers. Given its importance, we decided to devote a separate section to this problem.

From a public relations viewpoint, a general problem was that in Germany there was no institution that assumed the leadership role in communicating with the public. Anticipating this problem, Servet (1998, p. 19) proposed the creation of "euro-observatories" a few years before the changeover.

The observatories' role will be to monitor price conversions, spot any difficulties, collect information, operate as a point of reference, [and] distribute information [...].

² Preparing for a crisis is sometimes considered an independent stage.

[The observatories] should thus promote transparency of the changeover by guaranteeing to consumers that the conversion of national currencies into the euro will not be accompanied by underhand price increases.

[The observatories] must not be regarded as simple “message-bearers” of governments and administrations, which would totally undermine their credibility.

In Germany, no institution was assigned – or able to grow into – the role proposed in Servet (1998) and the institutions involved in this part of the changeover (ministries, central bank(s), statistical office(s), and consumer organizations) barely coordinated their actions and sometimes provided contradicting information.

An interview by the president of the European Central Bank (ECB) shows the lack of coordination among the various institutions involved. In December 2002, twelve months after the changeover, the ECB president was quoted saying “We have been reserved about recognizing that the changeover influenced prices somewhat.” In the interview, he estimates the changeover’s impact on inflation to around 0.2 percentage points.³

The statement surprises because the European statistical office had already estimated the impact in May (we mentioned this above) and the European Central Bank itself does not appear to be “reserved” about the impact. After a somewhat inconsistent way of communicating initially (see section 3.3 below), the ECB clearly recognized that the changeover had an impact on some prices in its monthly bulletin in July 2002.

The confusion that prevailed in the press about the issue of prices at the time is nicely illustrated by a New York Times’ comment on the interview where it is stated that “previously” to this interview “the [European] central bank ... had maintained that the introduction [of euro coins and banknotes] had no effect on inflation”.

This kind of uncoordinated way of communicating confuses both consumers and the media and undermines the authorities’ credibility. Effective crisis communication hinges on credibility. The difficulty in the case of a currency changeover is that the institutions involved often lack credibility. This is especially true for ministries but to some degree for central banks and statistical offices as well. Euro-observatories are unlikely to be more trustworthy than the institution establishing them. A solution to this problem is for the observatories to cooperate with consumer organizations. The independent consumer organizations would help to demonstrate that the euro-observatories were unbiased and looking after consumer interests. This government-consumer group alliance could have become the voice of the issue of prices and messages from the euro-observatories could have helped to shape media coverage of the changeover and could have send messages directly to the public.

An example of such a government-consumer group alliance is the cooperation between the German statistical office and the German Association of Consumer Organizations (vzbv) which was established in spring 2006. Germany is planning to increase VAT rates in 2007 and there are concerns that, again, a gap between actual and perceived inflation develops. Part of the service both organizations provide is a web-page where people can monitor how

³ The interview was conducted by the Dutch business channel RTL-Z. Reports can be found in all major European newspapers reported, also see the New York Times (2002).

prices of various items develop over time. Detailed information about the reliability of the data and how the data are collected is provided as well.⁴

A euro-observatory as proposed by Servet cannot work miracles, but having an organization that is able to make credible statements about what may happen and what did happen to prices would have made communication before and after the changeover easier and many problems could have been avoided.

3.2 PRE-CHANGEOVER COMMUNICATION

One of the first signs that a crisis might be approaching was the survey mentioned above in which more than a year before the changeover, 50 percent of the respondents expressed concerns about firms abusing the changeover to increase prices (Eurobarometer Flash 2001).

In communication management, this is called a warning sign. A warning sign indicates a crisis could be developing and requires pre-emptive efforts to prevent the crisis. The German government did take some actions though apparently not decisive enough. In an unusual act of solidarity between consumer organizations and retailers the government's campaign was harshly criticized as causing "muddle and uncertainty" among consumers. Both organizations expressed concerns that this uncertainty might afflict consumer behaviour and might eventually have macroeconomic effects (vzbv 2001).

In such a situation it is helpful to have an organization responsible for (and experienced with) communicating with the public. If, in addition, consumers consider this organization credible the fears can be confronted.

When such fears arise, a good strategy is to assure people that their fears are taken seriously, that it is possible that some firms might try to take advantage of the changeover, that consumers have the right to complain and that they should do so, and that firms that increase prices will be contacted and will have to justify their price setting.

At this point it is also important (and possible) to remind people that they should be fair in their criticism, that when they observe that one restaurant increased prices they should not discredit the whole sector, that they should also appreciate if a restaurant lowers its prices, that not all price increases are changeover related, that it is a sign of a healthy economy that prices change over time, that especially in the services sector prices tend to increase (Do you remember how much you paid for your first hair cut?) and that services prices will continue to rise after the changeover just as they did before.

These "reminders" should be provided before the changeover. After the changeover, when people already formed their opinion, they might sound didactic and might not serve their purpose.

Besides preparing the public it is also important to inform retailers and service providers that there is the danger that price increases of a few firms might discredit the whole industry. Firms should also know that if complaints come up, firms concerned would be contacted and asked to justify their price setting. Since this policy is for the benefit of the whole sector it should be possible to win support for it from retail associations.

⁴ Recently, the German Statistical Office has taken other measures to increase acceptance of its statistics among the public. See for example Bechthold and Linz (2005).

TRANSFORMATIVE EXPLANATIONS

Part of the strategy we have just described consists of what is called a “transformative explanation”; an explanation that transforms pre-existing, intuitive but inadequate understandings.

Roughly speaking, there are two opposing views about the possibility of a currency changeover to affect prices. One view, typically represented by economists, states that a changeover cannot have a significant impact on prices. For economists, the changeover provided a model test for one of their most fundamental theoretical results, the homogeneity postulate. The basic models of consumer and producer behaviour predict that supply and demand functions are homogeneous of degree zero in prices. Multiplying prices by some factor k will not have real effects; what counts are relative prices.

Note that the homogeneity postulate does not imply that a currency changeover cannot affect prices. There is a difference between a currency changeover and the thought experiment of multiplying all prices by a factor k . In practice, multiplying prices by a factor k leads to some confusion and firms might try to profit from this. In addition, the habit to price at pricing points (such as 0.99 or 24.90) forces firms to round up or down at the changeover which under certain circumstances might be noticeable in aggregate data (Eife 2006). Economic theory does, however, predict that any effect of a changeover must be limited; something which was confirmed by the data.

The other view is that a currency changeover may lead to significantly higher prices. One version of this view states that the confusion that comes with the introduction of unfamiliar coins and banknotes and the changing of nominal prices may be used by firms to raise prices and once agreed on a higher price firms stick to it so that the changeover might even have a persistent effect. Following the literature, we will refer to this view as the “lay theory”.

The lay theory has some apparent plausibility. It begs the question, though, why firms have not colluded on the higher price before the changeover. If firms are able to demand a higher price after the changeover, they should have been able to do so before. Firms do try to collude and set prices as high as possible but there are strong forces (competition) that hinder firms’ freedom to do so. Also, taking advantage of the confusion is not without risk. There is the possibility that a firm damages its reputation as a fair trader and the more vigilant consumers are the higher this risk.

Communication is difficult when the message opposes pre-existing, intuitive but inadequate understandings of the people addressed. In public health matters, policy makers often face such situations and repeatedly need to apply transformative explanations. Two classic examples (both from the 1960s/70s) are to persuade people to fasten seat belts when driving and to overcome parents’ concerns against vaccinating their child against small pox.

Following Rowan (1988 and 1995), transformative explanations contain four key steps.

1. State the lay theory.
2. Acknowledge the lay theory’s apparent plausibility.
3. Demonstrate the lay theory’s inadequacy.
4. Establish greater adequacy of the advocated theory.

In order to overcome the lay theory, policy makers need first acknowledge that the lay theory exists and that it has some apparent plausibility. Similar to what we have done above,

acknowledging consumers' logical motivations for holding the lay theory is a critical step. Simply stating that consumers' intuition is flawed places them in a defensive position and may put at risk the transformative objective of the message. Consumers must be dissatisfied with the lay theory before abandoning it. The fourth step is to demonstrate that the advocated theory is more adequate.

Consumers are making a mistake when they believe that a changeover can have a significant impact on prices and good communication should be able to help consumers adopt a more adequate understanding. Taking away consumers' fears is challenging. However, policy makers in areas other than economics are frequently confronted with such situations and successfully apply transformative strategies. In the next section, where we discuss post-changeover communication we will give another example of how a transformative explanation can help coping with people's inflation perceptions during a currency changeover.

3.3 POST-CHANGEOVER COMMUNICATION

Crisis communication principles state that the initial response to a crisis must be quick and consistent and that the organization needs to speak with one voice. A strong initial response helps an organization to take control of the crisis by defining the crisis event. "Quick" in the context of a currency changeover means that some response is necessary as soon as rumors of increasing prices appear and especially as soon as the media start reporting on the issue. Data collection and analysis take some time so that it is often not possible to be very detailed in the initial response. If this is the case, the organization can ask for some more time before providing a comprehensive response. "Consistent" means that the response needs to be free of contradictions and errors. Correcting previous statements gives the impression of being confused and inconsistent. The problem of speaking with a single voice was already addressed in section 3.1 (euro-observatories).

Crisis communication goes beyond collecting and providing information. Crisis communication needs to follow a "strategy". It is not enough to present statistics that the impact on prices was absent or negligible. The fact that the impact is negligible needs to be defended, even assertively. Being strategic also means that the communication channels need to be chosen carefully. Below, we will see that indirect communication through the media is not always appropriate. Messages communicated directly via advertisements or fact sheets mailed to people have a better chance of being heard.

In this section we will give two examples of mistakes that should be avoided in future changeovers. In both cases, the communication principles stated above were violated. At the end of the section we show that the discussion about the changeover's impact was relatively controlled in the weeks after the changeover but then it intensified suddenly in May and peaked in July, half a year after the changeover.

The joint report of the German statistical office and the Bundesbank on the impact we mentioned above was presented to the press on March 8th 2002 and shortly afterwards several other official reports appeared (e.g. Bundesbank 2002b, Buchwald et al. 2002b). These reports apparently did not reach a wide audience and in spring and summer the media were able to provide "new evidence" of the impact even though the reports already documented the impact comprehensively. It is irrelevant whether journalists were truly unaware of the reports or whether they deliberately ignored it. Letting the media assume the role of the institution informing the public of the "truth" about the impact was a serious mistake. First, because media reports are often unbalanced or even biased and second,

because in the eyes of consumers the authorities appeared unprepared and confused. In case the media do not show any interest in informing the public about the official reports, communicating directly with the public via advertisements or infomercials is an option.

The fact that the German statistical office and the Bundesbank started their joint study nearly two years before the changeover shows how serious both institutions considered this issue. With 18000 individual price series for 35 separate items, this study is by far more detailed than any study presented in the media. We believe that it would not have been very difficult for these two institutions to influence the discussion more determinedly and maybe assume the leadership role in communicating with the public on this issue. But again, the question of credibility arises and it might have been useful for the two institutions to cooperate with consumer organizations (see section 3.1, euro-observatories).

Another example of a somewhat unfortunate post-changeover communication is provided by the European Central Bank. Reporting on price developments at the changeover, the ECB published the following three statements in its monthly bulletin.

February 2002 (p. 22): As regards any pressure on prices stemming from the euro cash changeover, taking the above factors [weather and taxes] into account, there remains no evidence of a significant upward impact.

March 2002 (p. 32): For certain individual components at the disaggregate level—in particular within the service sector—price increases were observed in January 2002, which could be associated with the introduction of euro banknotes and coins.

July 2002 (p. 22): Another factor behind the recent rise in the annual rate of change in service prices appears to be some impact from the cash changeover. This impact seems to be most evident in a number of specific sectors, including restaurants, hairdressing, and dry cleaning.

From the very beginning, the ECB took the rumours that the changeover might have had an impact on prices seriously and addressed this subject in about every issue of its monthly bulletin in 2002. The three statements above have, however, a serious weakness. In particular for non-specialists (such as journalists) it appears that the ECB keeps correcting itself. Reading the February bulletin, a journalist would quote the ECB as saying there was no “significant upward impact”. In March, the ECB’s position appears to be that there “could” have been an impact and in July, the ECB’s view about what caused the impact is clear.

It has to be noted that for the February publication the January HICP data were not available, which is clearly stated in the Bank’s bulletin. The statement that there was no “significant upward impact” is based on a rough estimate (called flash estimate) of overall HICP inflation. No detailed breakdown into subcomponents is available for the flash estimate. The ECB should be credited for responding as early as February on the impact of the changeover but without having detailed data available it might have been better to provide an open response leaving room to react to later developments.

The three statements above – taken individually – are made with the appropriate cautiousness and taking into account all the information available at the time of writing. Looking, however, at the whole sequence they give the impression that previous statements had to be corrected. Even if not intended, this somewhat unfortunate practice undermines an organization’s credibility and might have contributed to people’s impression that the

authorities tried to cover up the price increase and “admitted” them only after the public outcry.

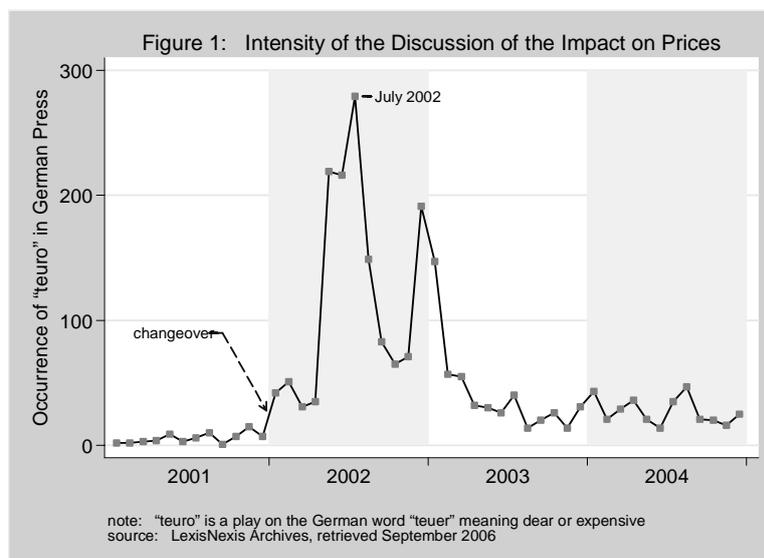


Figure 1 plots the occurrence of the word “teuro” in the German press from January 2001 until December 2004. Taking the word “teuro” as a proxy, the discussion increased with the cash changeover, leveled off somewhat in March and April and intensified significantly 5 months later to peak in July. A second peak occurred around a year after the changeover.

One reason for the resurgence in summer might be that the confusion (or lack of strategy) that ruled among the authorities became evident a few months after the changeover; with the Finance minister admitting what the Bundesbank had already shown two months before (see page 3) and the ECB apparently changing opinion and suddenly claiming that “there appears to be some impact of the cash changeover” (see page 8).

Another reason could be that as time passes, the feeling that prices were converted to the detriment of consumers was getting stronger. This trend is well documented in surveys conducted on behalf of the European Commission (Eurobarometer Flash 2002). The usual (and plausible) explanation for this trend is that people continue to use reference prices in the old currency and the older and the more outdated these are, the larger the error implied by this habit. In fact, the feeling that price were converted to the detriment of consumers increased once more in 2003 (Eurobarometer Flash 2003).

Here, people’s perceptions are based on an erroneous judgment of price observations and, again, good communication should be able to help people avoiding these mistakes. The mistake can be viewed as a version of “post hoc ergo propter hoc”, the logical fallacy that assumes that if one event happens after another, then the first must be the cause of the second.

A transformative explanation, as discussed above, might help again. The steps are (1) to acknowledge that many prices have risen since the changeover, (2) to acknowledge that it might appear that the changeover was causing the price rise, (3) to remind people that many goods and services tend to become more expensive over time and that they continue to do so after the changeover just as they did before. A nice way to make this point more convincing is to show graphically how prices developed over time, similar to what the German statistical office does in cooperation with the Association of Consumer Organizations (see page 5). (4)

The fourth and last step is to maintain that we would have observed the higher prices without the changeover as well and that the order of events (first the changeover and then higher prices) does not necessarily imply a causal relationship.

4. CONCLUDING REMARKS

Our main motivation to write this note was a general unease with the direction the literature on the perceived impact is heading. Many of the explanations proposed to explain people's perceptions are plausible but we strongly object to the notion that the perceived impact is something policymakers cannot do much about. People are making a mistake when they perceive the euro changeover to have had a significant impact on prices and good policy should be able to prevent people from getting such false impressions. Rather than an unavoidable side effect of a currency changeover, the perceived impact is caused by the inability of the authorities to communicate appropriately with the public.

For policy makers, one of the most important lesson from the changeover in 2002 is to understand that crises are perceptual. When people start expressing concerns about rising prices, we cannot ignore or dismiss them. The concerns have to be addressed in some manner even if they appear unfounded (Coombs 1999).

The mistakes made in communicating with consumers and, in general, in public relation issues are obvious and serious. Both the pre and post-changeover communication followed poor strategy, first, a failure to understand that a crisis was developing and then a half hearted and at times inconsistent provision of information about what happened to prices and what did not happen. Letting the media assume the role of the institution informing the public about the "truth" of the impact and communicating in a way that gives consumers the impression that the authorities admitted the impact only after public outcry illustrate the problems with the government response.

However, even being aware of the mistakes made, it will not be easy to avoid the perceived impact in future changeovers. This is ultimately a matter of trust. There will always be fears that such an event will bring disadvantages and statements by retailers or politicians are likely to be met with suspicion. The challenge is to establish an institution with sufficient integrity that when reporting on the impact appears credible. A government-consumer organization alliance for the euro-observatories may provide the credible, unified voice needed in the changeover. If a policy is likely to be misperceived and becomes a crisis, there are communicative steps a government can take to prevent the crisis. Perceptual crises about a policy can be managed and should not be viewed as an unavoidable side effect.

LITERATURE

Bechthold, Sabine and Stefan Linz (2005). "Enhancing the Credibility of the Consumer Price Index". Paper presented at OECD conference "Inflation Measures: Too High - Too Low – Internationally Comparable?". Paris, 21-22 June 2005.

Brachinger, Hans Wolfgang Brachinger (2006). "Euro or 'Teuro'? : The Euro-induced Perceived Inflation in Germany". Department of Quantitative Economics Working Paper No 5. University of Fribourg Switzerland.

Buchwald, Wolfgang; Jürgen Chlumsky; Nadine Engelhardt (2002a). "Zum Einfluss des Euro auf die Preisentwicklung in Deutschland". *Wirtschaft und Statistik* 9, German Statistical Office.

Buchwald, Wolfgang; Jürgen Chlumsky; Nadine Engelhardt (2002b). "Sechs Monate Euro – Eine Zwischenbilanz der amtlichen Preisstatistik". German Statistical Office, Press Document, Wiesbaden, July.

Bundesbank (2002a). "Introduction of Euro Banknotes and Coins – Price Developments in January 2002". Deutsche Bundesbank Monthly Report, March.

Bundesbank (2002b). "Consumer Prices and the Changeover from Deutsche Mark to Euro". Deutsche Bundesbank Monthly Report, July.

Bundesbank (2003). Monthly Report June.

Burgoyne, Carole B.; David A. Routh; Anne-Marie Ellis (1999). "The Transition to the Euro: Some Perspectives from Economic Psychology". *Journal of Consumer Policy* 22.

Chlumsky Jürgen and Nadine Engelhardt (2003). "Ein Jahr Euro - ein Jahr Teuro?". German Statistical Office.

Coombs, W. Timothy. (1999). *Ongoing crisis communication: Planning, managing, and responding*. Thousand Oaks, CA: Sage.

Del Giovane und Sabbattini (2005). "The Introduction of the Euro and the Divergence between Officially Measured and Perceived Inflation: the Case of Italy". Paper presented at OECD conference "Inflation Measures: Too High - Too Low – Internationally Comparable? Paris, 21-22 June 2005.

Economist (2002), "Hold the foie gras", *The Economist Print Edition*, May 23rd 2002.

Eife, Thomas (2006). "Currency Changeovers as Natural Experiments". Ph.D. Dissertation, University of Munich.

Engels, Erwin (2003). " 'Gefühlte' oder 'echte' Inflation – Anmerkungen zur Diskussion um die Entwicklung der Verbraucherpreise in Deutschland im Jahr 2002". *Berliner Statistik, Monatsschrift* 10/03.

Eurobarometer Flash (2001). Flash 98/4, September.

Eurobarometer Flash (2002), "The Euro, One Year Later". Flash EB 139, November.

Eurobarometer Flash (2003). "The Euro, Two Years Later". Flash EB 153, December.

European Central Bank (2002a). "Price Developments". European Central Bank, Monthly Bulletin, several issues.

- European Central Bank (2005). "Consumers' Inflation Perceptions. Still ad Odds with Official Statistics?". Monthly Bulletin, April.
- European Commission (2005). "The Effects of the Euro Changeover on Inflation". PAN II, Public Administration Network (March).
- Eurostat (2003). "Euro changeover effects". Annex to the press release of 18 June 2003.
- Fluch, Manfred and Helmut Stix (2005). "Perceived Inflation in Austria – Extent, Explanations, Effects". Quarterly Review of Economic Policy Q3/05, Austrian National Bank.
- Fokus (2002). "Inflation; Die Wahrheit über die Preise". Focus 32/2002, August.
- New York Times (2002). "World Business Briefing Europe: The Euro And Prices". December 27th.
- Rowan, Katherine. E. (1988). "A Contemporary Theory of Explanatory Writing" Written Communication, Vol. 5, No. 1, 23-56.
- Rowan, Katherine. E. (1991). "Goals, obstacles, and risk communication: A problem-solving approach to improving communication about risk". Journal of Applied Communication Research, 19, 300-329.
- Rowan, Katherine. E. (1995). "A new pedagogy for explanatory public speaking: Why arrangement should not substitute for invention". Communication Education, 44, 236-250.
- Servet, Jean-Michel (1998). "Summary of experts' reports". Compiled for the Euro Working Group / European Commission DG XXIV on psycho-sociological aspects of the changeover to the Euro. Report no. 63, Brussels, EC, DG-XXIV. Consumer Policy and Consumer Health Protection. (in co-operation with Carla Collicelli, Carole Burgoyne and Norbert Reich).
- Traut-Mattausch, Eva; Stephan Schulz-Hardt; Tobias Greitemayer; Dieter Frey (2004). "Expectancy confirmation in spite of disconfirming evidence: The case of price increases due to the introduction of the euro". European Journal of Social Psychology, No. 34, pp 739-760.
- vzbv (2001) "Gemeinsame Pressekonferenz des Hauptverbandes des Deutschen Einzelhandels (HDE) und des Verbraucherzentrale Bundesverbands e.V. (vzbv)". Joint Press Conference of the German Retail Association and the German Association of Consumer Organisations. August.
- vzbv (2002). "Statt Euro-Boykott konsequentes Haushaltsmanagement". July 8th 2002. Retrieved May 2006 <http://www.verbrauchernews.de/artikel/0000012311.html>.