BLACK AND GREY MARKETS OF ILLEGAL EXCHANGES
IN POST WW II GERMANY

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Abstract

In Germany, during the months following the end of WW II, illegal exchanges increased sharply due to failures in the rationing system (the only legal one). In contrast with other black market episodes, these exchanges took place through two different markets. For many goods, like foodstuffs, these markets compete for clients from May, 1945 to the monetary reform in June, 1948. This competition created a split of the population between these two markets. The coexistence of two types of illegal markets is rare in economic history and striking for economic theory as we think that the most efficient should take over the inefficient. In this paper, we describe the pattern of illegal exchanges and propose a transaction cost based approach to explain the coexistence. We find evidences that the explanation lies in the differences in the police's ability to enforce the price legislation on each market.

> *"Briefly, to summarize, the economic function and significance of legal prices has been undermined by three developments: (1) compensation trade done at legal prices, chiefly among larger business firms, (2) barter without intervention of money and [legal] prices, chiefly between peasants and the rest of the population, and (3) trade at black market prices, chiefly between consumers and intermediaries and among the intermediaries."*
> *Monthly Report of the Military Governor n°21, Feb.-Mar 1947, p. 20*

In Germany, during the months following the end of WW II, illegal exchanges increased sharply due to failures in the rationing system (the only legal one). It was unable to provide Germans with enough rations. In contrast with other black market episodes, these exchanges took place through two very different ways, termed as grey and black market. For some goods, like cigarettes, these two markets were complementary: The black market

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supplied the goods used as money on the grey market (eg. cigarettes, chocolate, and alcohol). But for other goods, like foodstuffs, these markets were in competition from 1945 on to the monetary reform in June, 1948 without any collapse of this kind of exchanges in anyone of these markets. Rather, this competition created a split of the population of traders between those choosing to exchange on the black market and those exchanging on the grey market. Taking as given the existence of illegal trades[2], the purpose of this paper is first to characterize the differences between these two markets and second to propose an explanation of their co existence[3].

The black and the grey markets were also active during the war. But their characteristics experienced a huge change during the months following the end of WW II. During the war, grey exchanges took place mostly between relatives or within some network implying neighbours and relatives (Klemperer, 1946). Features of this kind of exchanges changed considerably after the war (Bignon, 2002): The feeling (during the war) that illegal exchanges had to take place secretly disappeared in favour of a principle of availability of goods searched. Then, many Germans came to direct their search for goods to farmers or producers they didn't know before. This kind of exchanges became anonymous and they implied huge transportation and time costs. On the side of the black market exchanges, black market places emerged after the war. These places could be easily located (*Tiergarten* in Berlin, *Viktualien Markt* in Munich) and trades often took place daily and implied many traders. Hence, the transaction technology of each market differs considerably from the one of the other.

Using game theory, the coexistence of two active markets can be reinterpreted as a game in which some agents have selected one market to transact on while the remaining part of the population has chosen to exchange on the other. Assuming rational behaviour, the explanation of this observation entails the search of an explanation of the difference in terms of payoff that each agent can get on both markets. Note that to observe a split of the population between the two markets, there had to be some kind of heterogeneity among agents as this will entail a difference in the observed behaviour. In this paper, we argue that these two markets differs in the ability of the police to enforce the price legislation which has increased the prices on the black market more than those of the grey market because of the centralised nature of black market exchanges. Moreover, this creates incentives for agents to escape from this police fight. The majority choose to exchange on the grey market as its much decentralised nature makes harder the enforcement of the price legislation by the police. The remaining part, the one exchanging on the black market, adopts technologies that give them the ability to resist to the effects of police raids (mainly the confiscation of the goods exchanged) by acquiring weapons or forming coalitions such as mafia.

[2] Cf. Lindauer (1989) for a survey of the reasons that explain theoretically this existence. See Menderhauser (1949) for the German case.
[3] No study has been done on that topic since much of the work on this episode deals with the conditions of the "German miracle" of the 20th of June, 1948 (e.g. Abelhauser, 1975, Ritschl, 1985, Buccheim, 1988, Berger & Ritschl, 1995).

To document our investigation of this pattern of exchanges, we use historical surveys (Menderhauser, 1949: Lutz; 1949, Piettre, 1952, Rothenberger, 1980; Boeckle, 1988) together with archives of the U.S. army[4] and of the regional administration of Bavaria[5]. According to archives of the U.S. occupation authority for Germany, two assumptions have been proposed:

The first one explains this difference through a difference in the means of payments used on each of these markets: the black market was characterised by payments in fiat money (i.e. the Reichsmark) whereas the grey market was a barter or commodity moneys market. However, the arguments supporting this thesis cannot be reconciled with the explanation of the coexistence of two competing markets.

The second explanation lies on a “moral” condemnation of the black market by some Germans: black market exchanges were thought of as “profiteering” while grey market was associated with “self-help”. The coexistence would then lay on a moral code forbidding the majority of the population to exchange on the black market, thereby creating the split of the population between these two markets. This explanation is fragile: the level of prices played a crucial role in the distinction between profiteers and “self-help” consumers. As prices were endogenous on each market, the moral condemnation was a “by-product” rather than a cause of the particular organisation of exchanges that created such a huge difference in prices that people rationalised their choice in favour of the grey market by this reference to a moral judgement.

We then propose another explanation, based on a micro-economic study of exchanges: Germans, when choosing the illegal market they wanted to deal on, faced a trade off between transaction costs and prices: on the grey market, prices were lower than on the black one but transaction costs were far higher. The key issue was then the explanation of the high prices of the black market. We find evidence showing that high prices were due to differences in the police’s ability to enforce the price legislation on each market. This explanation also helps us to better understand the particular role played by the two above mentioned assumptions. Social norms makes the entry on the black market more costly for well integrated Germans, reinforcing their choice for the grey market while the centralized nature of black market exchanges and the creation of mafia makes the Reichsmark more liquid and more acceptable on this market.

The paper is organised as follows. The first section describes the exchange technologies of each market as well as the participants. The second part explores the various explanations concerning the split between these two markets for illegal exchanges.

I. The Geography of Illegal Exchanges in post WW II Germany

Black market is usually synonym with a market on which illegal trade is carried on. But, as the German case experienced two different forms of markets for illegal exchanges, we need to distinguish between what people termed black and grey trade. We will use the

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concept of "illegal markets" to describe both types of markets while black market will qualify the particular pattern of exchanges described below.

Although neither of the markets were authorised by the law[6], the distinction roots in the perceived enforcement of trade and price legislation on each of them. Black market was not only prohibited by law but also prosecuted by the police and the population that condemned its use as a way to trade. But even if most grey trades were also forbidden by law, the prohibition was difficult to enforce by the police and tolerated by Germans (the second contributing surely to the first).

I.1. The Failure of the Rationing System and the Rise of Illegal Exchanges

From the war the Allied Occupation Authorities inherited from a very highly developed system of monitoring both the allocation and the prices of goods. This system - created by the War Economy Ordinance of the 1st of September, 1939 - was usually called the rationing system. It fulfilled two functions, the authorization of price increases and the centralisation of the allocation of civil goods[7]. People had to work for some firms for a wage paid in Reichsmarks (RM). On the consumption side, they received a monthly food and textile ration paid in RM and some ration tickets. The quantity of goods produced in the economy was shared on a monthly basis by the rationing authority.

When Germany lost the war, the disorganization of the economic system, mainly the transportation system and labour supply, was so great that production was dramatically reduced. This breakdown of the economy entailed major changes in the food supply and motivated an increase in the number of illegal exchanges[8]. Allies feared famine and decided to continue the rationing system, with minor changes in price policy.

Nevertheless, the efficiency of the rationing system, from the point of view of the consumer, was considerably reduced with the end of the war. The daily ration delivered to a normal consumer decreased from 1900 Calories per day in 1944 to less than one thousand in June, 1945 (Backer, 1971). Given this deficiency of the rationing system, Germans had incentives to supplement their rations. Some decided to turn gardens into kitchen garden, others decided to engage in illegal trades.

Despite the difficulties in estimating the amount of illegal trades, one can get an idea in the reports of the American Occupation Authority. The Monthly Report of the Military Governor of November 1945 gauges the proportion of illegal exchanges to "20 percent of the food supplies and 25 percent of the building materials available, but the overall proportion of

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[6] The consumer Regulation Penal Ordinance of 16 November 1941 provided penalties against all unauthorized diversion of controlled commodities. The War Economy Ordinance of 25 March 1942 prohibited all barter of compensation transaction. The Allied Control Authority Law n°50 that came into force on 7 April 1947 provided heavy penalties for "illegal" transactions in rationed goods.

[7] The delivery of goods was ensured by private shoppers but clients could buy only if they possessed a rationing card composed of many coupons that were, together with the RM, necessary to allow the purchase of rationed goods. Many types of cards existed to discriminate the food rations between male and female workers, pensioners and young people. For a theoretical explanation of the rationing system, see Tobin (1952).

[8] Cf. OMGUS report on "price control, rationing and black market in Bavaria for the week ending the 22 June 1945", *IfZ*, 1/177 3/8, mark BICO C+J).

basic commodities moving through illegal channels is probably much lower"[9]. During the spring 1946, six months later, this share grew to 50% and the barter of luxury goods or clothes against food tended to be replaced by the one of industrial goods against food[10]. A later report indicates that barter amounted 'to 30 to 60 per cent of the entire commerce in industrial goods in some parts of the combined U.S. and British zone."[11].

I.2. The Black Market

Black markets often took place on a daily basis in well known locations of almost every city in Germany. As seen on figure 1, they could be easily located by a vast majority of the population. In most big cities, the train station or other focal points such as the *Tiergarten* in Berlin or *Viktualien Markt* in Munich hosted the activity of this illicit business. Many different types of goods were sold on the black market, from ID to medicines, jewellery, gold, dollars, any kind of food, bicycles, radios, cigarettes, tires, cars and so on[12]. There exist some prices of such trades that offices of the German Price Police picked up. These prices were far higher than legal prices, ranging from 10 to 200 times higher than former legal prices, depending on the type of good sold[13]. This ratio between black and legal prices seems to be quite stable during the course of the period (ibid).

Although no price index could be computed for such trades, the general opinion is that black market prices amounted to about 100 times the legal prices of a good[14]. In the case of one pound of coffee, the level of prices represented, about 150 percent of the average monthly income[15]. Hence the black market was unaffordable for the vast majority of the population on a sole income basis. To participate on this market, an average worker either had to spend his savings or sell some of the luxury goods he possessed. Others reported black market participants were Displaced Persons (D.P., i.e. German having escaped from the soviet zone or the East German territories in Poland or Czechoslovakia), allied troops and many Germans, although it was thought that D.P. represented "the bulk of the marketers"[16].

The level of prices implied that the market was very tight. Piettre (1952) estimates its market size to 1% of all transactions conducted at the time. Menderhauser (1949) provides a slightly different figure with an estimation of no more than 10% of the total of transactions

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[9] Report n°5 of the U.S. Military Governor, Dec. 1945, section "Trade and Commerce", *IfZ*.
[10] Cf. Monthly Report n°11 of the Military Governor, U.S. zone, *IfZ*
[11] "Problems of Price and Market Policy", 06/18/1947, mark 4/77 2-1 Econ TC blatt 4/5, *IfZ*.
[12] There are few sources documenting precisely what kinds of goods were sold on each particular black market. For Bavaria, some of these lists can be found at the *IfZ* (OMGUS 1/194-1 folder 6, BICO U.S. cust gp; OMGUS 1/191/1/41 Bico), others at the *BHA* (OMGBY, FOD, branch D, marked 9/81, 1/22; OMGB-FOD, Branch D, Vilshofen, 9/76 - 2/15, *von Landratsamt Vilshofen, Preisbehörde*; OMGBY, 13/77-2/8 of September 1948, Economics Division), both in Munich, Germany. The Monthly Reports of the Military Governor, U.S. zone (OMGUS) sometimes mentioned such examples (*IfZ*)
[13] Monthly Report of the U.S. Military Governor, July 1946, p. 13 and Nov., 1946, p. 44; *IfZ*.
[14] According to Menderhauser (1949:653-4), "Information collected by the price supervision offices and the police indicated that in May, 1947 black market prices in the main cities of the U.S. zone were about 100 times or more the legal prices for sugar, butter, coffee, saccharine, flour, ladie's stockings, soap, flints; about 75 times the legal prices of oleomargarine, eggs, liquor; about 50 times the legal prices of potatoes, beef, Leica cameras; about 25 times the legal prices of coal, suits and dresses, automobile tires and gasoline".
[15] Monthly Report of the Military Governor, U.S. zone, Aug.-Sept. 1947, p. 2; *IfZ*.
[16] in Report of the 07/10/1945, shelf mark 1/177 3/8 BICO C+J, *IfZ*.

by volume. This tightness of the market implies that just few agents were involved in such trading. The Monthly Report n°21 of the Military Governor of the U.S. zone (Feb.-March 1947:20) states that it played "a relatively greater role in the illicit dealings between consumers and intermediaries than in dealings between larger business firms or between city people and intermediaries". Moreover, "a vast class of intermediaries that has sprung up – unemployed youths, returning prisoners of war, uprooted German migrants, and some displaced persons – transacts a large proportion of the black market business proper, done at black market prices." (ibid).

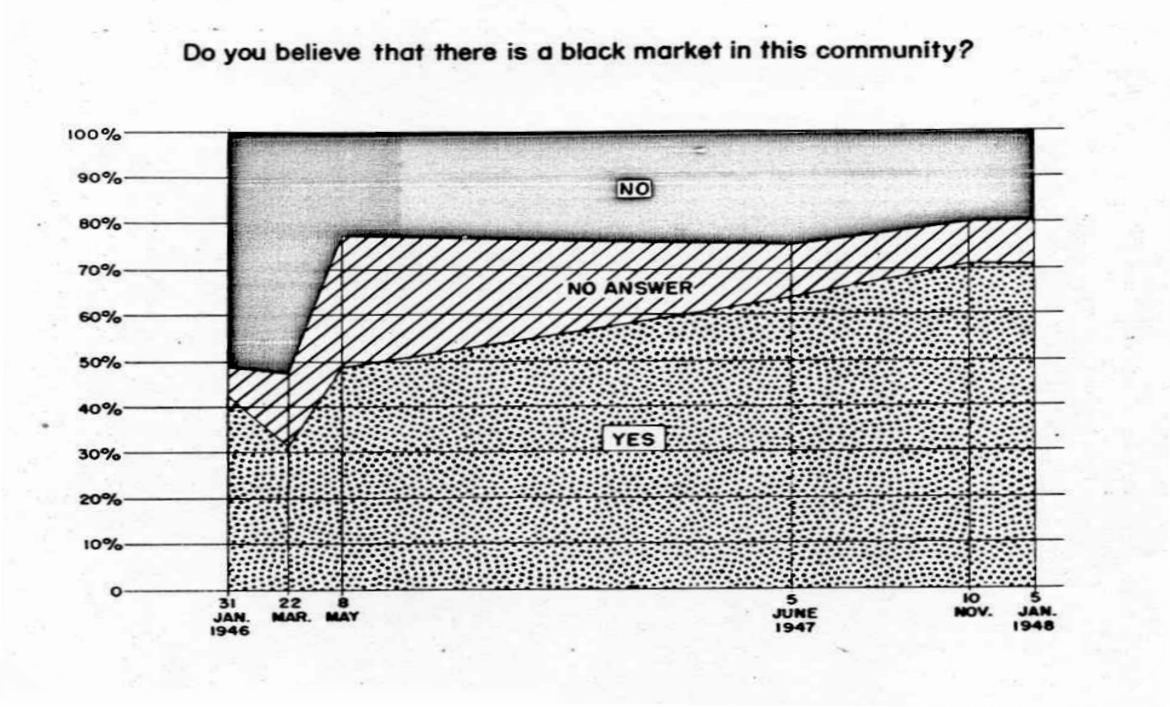

Figure 1: Survey on black market existence realised by the Office of Military Governor, U.S. zone.

The level of prices seems to vary with the size of the city where they were quoted, but also with the specialisation of the area. As noted by the "Weekly Black Market Report[17]", the differences in regional production were used by some traders buying in zones in which items were abundant to resell them in another where they were scarce. Despite this emergence of "big business", it seems that the black market "involved mostly small individuals transactions rather than the operations of any large scale organized Black Market 'Ring'"[18] .

I.3. The Grey Market

The grey market took place in a more decentralised way than black marketing. It often occurred between pairs of isolated traders or, in the case of business firms, through exchange chains. These trades, mostly disintermediated, concerned firms and individuals, either wagers or farmers. This market seems then far away from the image of the "walrasian" market and to describe it, and the "search" description of a market fits better. Estimates gauged the share of

[17] #14, Date: 15 March 1947, mark 15/122 3/19 CAD 1/3, *IfZ*.
[18] in Report of the 07/10/1945, shelf mark 1/177 3/8 BICO C+J, *IfZ*.

this market in September 1947 from one third to one half of all business transactions in the Bizonal area[19] (U.S. and British zone) and about 20-25% of transactions in foodstuffs or clothing. This market was labelled as "grey" to underline that, in the course of the crisis; it became more and more considered by the population as a "usual" way to carry on business. This entailed a demand for legalisation[20] that culminated with the Declaration of Weinheim made by the 35 German Price Control Officials of the Bizonal area on the 8 of May, 1947. Let us first describe barter between peasants and city dwellers and then turn to the study of compensation trade among firms.

Barter relationships between peasants and city dwellers

The grey exchanges between individuals were very disorganised and trade occurred on a barter basis rather than with money. The Monthly Report of the Military Governor of August and September 1947 states that "the shortages are so great and the disinclination to use money is so prevalent that various forms of direct barter are frequently substituted for normal methods of purchase and sale." (p. 2).

Large scale traffic between industrial cities and agricultural districts developed itself with the crisis. Such barters involved mainly city dwellers and farmers, although some workers of rural areas also participated. The principle underlying this type of trade is quite simple: As most of the needed goods were lacking in the city, one had to go directly to producers to buy them. Those needed goods were mostly foodstuff but also clothing and shoes. Hence, to find shoes, many travelled to Schwaben (South-West of Germany) and for fruits, people took the train to Bavaria.

To realise such deals, city dwellers had to use either the public transportation system or, for the wealthier individuals, their bicycle or their car. As train tickets were paid in RM and as the money had lost much of its purchasing power except on the rationed market, travelling by train was very cheap. As a consequence of these *Hamsterfahrt*[21], the train traffic increased sharply during the crisis. This is confirmed by the evolution of the main index used to measure the activity of the Reichsbahn (the state train company): After having reached a level of 300,8 during March 1948 (base 100 in 1936), it falls to 127,5 in July 1948, just one month after the monetary reform that succeeded in introducing the German new money (Burlaud, 1951:82). Moreover a letter of the American Consulate in Hamburg (North of Germany) stated that "As trains entered stations and it became obvious that a police check

[19] In Menderhauser, 1949, p. 655: "'At least 50%' was the guess of German government officials in the Ruhr area". The report "Problems of Price and Market Policy" of the 18 June, 1947 shows a slightly different picture, mentioning that this was true only "in some parts of the combined US and British zone" and that the scope of this form of trading varies from region to region, from industry to industry and from plant to plant" (p. 5; OMGUS 4/77 2-1 Econ T&C, blatt 4/5, *IfZ*.

[20] This legalisation was never accepted by the Allied Authorities since "this trading produces inequities of a particular sort. The basic industries cannot participate in it as easily as the producers of finished goods. Plant managers and workers are not rewarded in proportion to their productive performance but in proportion to their trading skill and the time spent in scouting and transporting – this is, away from productive work". (in "Problems of Price and Market Policy, 06/18/1947, OMGUS 4/77 2-1 Econ T&C, p. 5, *IfZ*)

[21] This could be translated as the « travel of hoarders".

was about to take place, many passengers threw food stuffs and merchandise out of the windows or left them on the floor unclaimed in order to escape detection”[22].

Farmers welcomed this barter exchange as they lacked some industrial goods such as cement, fertilizers, tires… Furthermore, they complained about the difficulties in inter-zone trade (mainly between French, British and U.S. zone) because “though they are forced to fulfil their delivery of foodstuffs they have not received any tools or implements from the British zone”[23]. This gave them an incentive to retain their deliveries and to accept to trade with “travellers of the British Zone which offer to barter food for such tools.” (ibid).

The goods city dwellers (workers) sold were at first, second hand goods or luxury goods. For these latter goods, trade often implied selling on the black market to convert the good possessed into objects more acceptable to farmers. An example of such complementarities between the black and the grey market is reported by the Herald Tribune (02/28/1947): When “one Berliner has a large radio that he has decided to sell, he cannot conveniently lug it into the country in search of a farmer willing to give him butter for it. Instead, he trades it to a black marketer for cigarettes and takes the cigarettes to the farmer”.

During the crisis, industrial goods tended to replace second hand goods in trades with farmers as firms decided to supplement the money wage with newly produced goods[24]. Contrary to luxury goods, workers whose wages were supplemented with goods seem to have little use for the black market. In many cases, workers had to search for a double coincidence of wants. For example, the Intelligence Division of the Office of the Military Government for Bavaria reported that “Detachment A-250 Bad Kissingen and Det. E-237 Ingolstadt call attention to the fact that it is customary in the British zone for employees to receive part of their wage in industrial goods in order to barter these items against food in Bavaria and other lands” [25]. In other cases, the work’s council (*Betriebrat*) organised the supplying of needed stuffs – sometimes in contact with the buying department of the firm (Rothenberger, 1980; Rüther, 1991). Then, firms were often able to supplement money wages with "inducements such as lunches and goods”[26]. However, this ability depended strongly of the kind of goods produced. As noted by the Monthly Report of the U.S. Military Governor “Industries making such primary producers’ goods are at a relative disadvantage in attracting and holding labour and in making compensation deals with a broad variety of customers.”(Feb.-March 1947:20)

Compensation Trading between Firms

To purchase inputs outside the rationing system, firms had two main possibilities: they could either deal on the black market or search for other firms willing to sell them illegally what they needed. Given the high black market prices, black trade was not the normal way to

[22] “Black Market Activity in Hamburg”, American Consulate; OMGUS 760/4 POLAD, *IfZ*.

[23] Black Market Report #14 for the week ending 03/15/1947, Passau Sub-regional area, OMGB 15/122 3/19 CAD 1/3, *BHA*.

[24] Lutz, 1949 and Monthly Report of U.S. Military Governor (July 1946:13): “Often, German workers are unwilling to work unless wages are supplemented by food or other items”.

[25] Office of the Military Governor for Bavaria (OMGB), Intelligence Report 02/11/1948, ODI 7/36-2/4 p. 2/17, *BHA*.

[26] Monthly Report of the Military Governor, U.S. zone, August-Sept. 1947, p. 2: *IfZ*.

buy the inputs necessary for production. In few cases, it was used either to find parts needed to repair machinery that could not be found elsewhere or to sell some goods in order to get cash. However, using this trade channel was considered as a second best. They rather engaged in "compensation trade", i.e. "sales tied to purchases"[27] organised between firms or groups of firms.

Grey market was thus used to purchase inputs and hold workers. Technically, a compensation trade looked like a monetary exchange, although the purchase was linked to a sale. These transactions were mostly done according to the formula "peace time value for peace time value", that is at a price that although negotiated was close to legal price, or in any event, well below black market prices[28]. This indicates that the problem firms faced was not so much to evaluate the price of goods but rather to find inputs, raw materials, etc…

For some goods, the formula used to negotiate prices gave effectively the pre-war level. For example, "a quantity of shoes worth 1000 RM is ordinarily bartered for a quantity of tanned hides worth 1000 RM, both values being taken at legal prices."[29]. This may not be true, however, in cases where the relative scarcity values of the goods to be exchanged differed markedly from their pre-war relative price[30]. This is the case with tires that were much scarcer than, e.g. gasoline. Hence, in a barter transaction involving these two goods, there was a tendency for the seller of tires to require 3 times as much gasoline as that indicated by the "peace time" value formula[31].

The proportion of goods bartered through compensation varied with the efficiency of the rationing system in providing the necessary inputs. For example, a survey of compensation transactions engaged in the 22 largest Bavarian shoe factories showed that for the first half of 1947, 84% of their requirements of nails and metal parts and 90% of those of textile were acquired through compensation. However, these firms received 100% of their leather requirements under official allocation without compensation[32].

Although this way of trading could be time consuming (Menderhauser, 1949:656), for firms, many advantages were associated with it. First, in a context in which goods were on short supply, compensation implied that a firm did not sell its goods for money unless it received other tangible goods in return.[33]. Second, the goods bartered this way fulfilled the elementary requirements of accounting to stockholders and the tax authorities which business firms could not escape. Moreover, bargaining in this type of trade was done at constant prices

[27] MR 21, Feb-March 1947, p. 19

[28] This criterion is the main one the newspaper 'Der Telegraf' (03/10/1948) used to discriminate between compensation and black trade.

[29] "Problems of Price and Market Policy", 06/18/1947, p. 6, 4/77 2-1 econ T&C blatt 4/5, *IfZ*.

[30] Menderhauser (1949) reported that the exchange rate between cement and coal was « one for one » although the ratio of legal price was « one for one and a half ».

[31] "Problems of Price and Market Policy", 06/18/1947, p. 6, 4/77 2-1 econ T&C blatt 4/5, *IfZ*.

[32] OMGUS, mark 4/77 2/1 Econ T&C, blatt 2/5 (*IfZ*).

[33] The Monthly Report of the Military Governor (Feb-Mar 1947, p. 19, *IfZ*) noted that "What matters primarily is the type and quantity of goods made available and only secondarily the price relation of these goods. That is, what is important is the rate at which a shipment of hand tools can be charged off against a shipment of tires, a bag of cement against a sack of potatoes, an allotment of new books against cigars to be provided to the Printers' workers".

although the effective exchange rate between the commodities traded was adjusted through a reduction (increase) in the quantity or variety of the scarce goods offered to the other party.

In principle, both types of trade contravene either the legislation on prices or the laws organising the rationing system. Each Land (regional) Government and their Economic Offices had to administer these laws under the powers conferred by the German legislation over prices and rationing. The Allied Forces were only involved in the supervision of the actions taken by these offices regarding compensation trade. However, in the course of 1947, a big debate burst between the German Price and Economic Administration and the U.S. Military Government. It begun with the adoption of the Weinheim Resolution of May 8, 1947, that demanded either a prompt neutralisation of excess purchasing power or a partial authorisation – urged by businessmen – of some compensation trades (mainly to procure inputs "urgently needed", excluding then, e.g., foodstuff). Following the adoption of this resolution, the Finance Minister in Hesse tried to issue a Directive aiming at regulating compensation transactions. Both the directive and the resolution were turned down by the Bipartite Economic Control Group (British and U.S. occupation government).

During the fall 1947, with the "Spinnfasser trial"[34], the Kassel District court reactivated the debate by rendering the opinion that "The war economy ordinance[35] is existing law, but existing law may conflict with justice" as "compensation transactions are an inescapable necessity under present circumstances"[36]. It is worth to note that with this debate, the U.S. occupation authority begun to distinguish in its official report the black market from the grey one. This change in the word used to qualify those illegal trades mirrors the fact that compensation trading was "widely accepted as a lesser evil than black-marketing proper"[37]. These German attempts reflect up to a point the tendency of German Regional Governments of the U.S. zone to tolerate the existence of some degree of compensation trading as it was pointed out "that there is no other way for the plants to stay in business, to get supplies, to hold workers, to control absenteeism"[38].

II. Explaining the Difference between Black and Grey market

The above description of the black and the grey markets indicates that the functions fulfilled by each market seem to be either complementary or substitute. It seems that e.g. for cigarette, they were complementary as Germans could have used the black market to convert their goods into commodity money (the black market acting as a "Mint"). Nevertheless, for many other goods like food, clothes, shoes, these markets competed to attract clients. In this section, we first study the two basic explanations advanced for this coexistence of two competing markets and then turn to an explanation in which the effect of the asymmetric enforcement of price control by the police explains this fact.

[34] The first public trial of German Businessmen for conducting compensation transactions opened on 08/25/1947. The director and various leading officials of the Spinnfaser A.G., a chemical firm, were accused of a variety of violations of economic control in the later part of 1946 and early 1947.
[35] Paragraph 1a of this 1942 Ordinance forbids all barter transactions.
[36] Monthly Report of the Military Governor, U.S. zone, Aug.-Sept. 1947, p. 4-5, *IfZ.*
[37] "Problems of Price and Market Policy", 06/18/1947, p. 6, 4/77 2-1 econ T&C blatt 4/5, *IfZ.*
[38] Ibid.

II.1. Does the Fragmentation of Illegal Market lie in a Difference in Means of Payment?

Sometimes, documents of the U.S. Army's Price Control Section argued that the main difference between black and grey exchange lied in the kind of means of payment used to pay purchases. Menderhauser (1949, p. 652) also defined the "German black market before the currency reform (…) as the purchases and sales for money (or for such substitutes as cigarette or coffee)". Following the interpretation of these sources, the black market attracted traders that wanted to exchange for money while the grey market attracted those refusing to use it. Sustaining this view requires documenting the reasons why people demanded RM on the black market while some large part of the economy renounced to it in grey exchanges. Three reasons, although fragile, can explain such a money demand.

First, until November 1945, U.S. soldiers had made profit from arbitrage due to the difference between the official exchange rate of the RM against the U.S. dollar and the black one. This arbitrage implied three steps. First, soldiers bought goods at the military shops to resell them against RM on the black market. They then changed the money earned at the military foreign exchange office at the legal exchange rate. As long as the change was not limited by the U.S. army, high profits were possible. According to Botting (1985:187-188), around 11 million dollars were sent back to the U.S. during the first four months of the military occupation. After November, 1945, the amount of RM each soldier could change was limited to their "pensions" and the traffic changed so that soldiers sent goods to the U.S.. As it seems that soldiers were only engaged in black marketing and not in grey exchanges, this could explain part of the impression that black exchanges relied on money.

Second, the black market was also a liquidity provider for some Germans that refrained from working but needed money to pay their ration and other legal services[39] (e.g. phone calls, train ticket, rent…). In that case, the black market was complementary to the official market and we have an explanation of a demand for RM on the black market. But note that these behaviours must have been sufficiently rare in order for prices not to be affected by the increase in the supply of goods. This comes directly from the fact that, as the black market worked as a free market (free entry, free prices fixation...), a sufficient increase in the supply of goods, keeping constant the stock of money, would have resulted in a price increase. The archives mentioning the relative stability of black prices prove that this did not happen during the period.

Another reason explaining this impression could be the existence of a risk premium on the black market when payments were made in RM. As noted above, prices on the black market were twenty to a hundred times higher than official prices. This assumption can be tested by comparing black market prices (labelled in RM) before and after the currency reform of the 20th June, 1948. This currency reform replaced the RM by the Deutschmark at a

[39] "Another aspect of this situation is the large number of "non-employed' – those of the potential labour force who are neither employed nor unemployed but who have withdrawn, themselves from the labour market. (…) the plasterer who has worked on Sunday at a farmer's home for potatoes and *wurst* worth RM 500 at black market values – these do not have to budget carefully those Reichsmark expenditures which can continue to be made at the legal value" (Monthly Report of the Military Governor, U.S. zone, Aug.-Sept. 1947, p. 2; *IfZ*)

rate of 20 RM for 1 DM, with a blocked amount of 5% of the old money that could be exchangeable on the 1st October, 1948. While the currency reform also implied a huge modification of the black market activity[40] as the incentives to make black trades decreased with the greater availability of goods at legal prices, the comparison of black market prices at the end of June, 1947 with those at the beginning of July, 1948 show the existence of a risk premium associated with payments in RM. As the new money to be better perceived, we expect a decrease in prices in 1948. To prove this, we use the mean of two samples of BM prices collected by the German Police in 68 Bavarian towns[41].

units: kg except for cigarettes, 1 pack	butter	coffee	sugar	20 cigarettes	flour
Mean of prices, 1947 (RM)	273,16	568,36	132,72	101,4	31,04
Mean of 1948 prices, (DM)	11,06	23,91	4,31	4,32	1,62
1947 price/1948 price	24.7	23.8	30.8	23.5	19.2

Table 1 : Comparison of 1947 and 1947 black market prices in 68 towns of Bavaria [42]

Computations indicate that the price of butter was divided by about 25 in one year[43]. This price varies, as for other goods, in the same way as we would expect if the risk premium assumption were verified. This discount is also documented by some of the reports dealing with the monetary or price situation in the American zone. The major reason explaining both the acceptation and the discount on the RM is the common belief among the population that a currency reform had to take place sooner or later. The knowledge of the necessity of such a reform was studied by the Allied Forces from the end of 1945 on, but many Germans Officials were aware of this project that was often announced in the newspaper[44]. According to the Monthly Report of the Military Governor of the U.S. zone of August and September 1947 (p. 1), “it is generally anticipated among the German population that some form of scaling down of the existing monetary medium is inevitable”. As long as the Allied Army Authorities decided not to remove price control and rationing, the only solution to deal with the situation of monetary overhang was a currency reform.

However, even if some evidence suggests a role for the RM on the black market, it seems that it never had a monopoly as a means of payment on that market as “people grasp every opportunity of purchasing tangible objects rather than retain German currency”[45].

[40] Cf. Monthly Report of the Military Governor, U.S. zone, July 1948 (*IfZ*)
[41] The first sample consists in prices of 5 types of goods on the 1st of July; 1947 while the second consists of prices of the same 5 goods in the same towns but on the 30th of June, 1948.
[42] Data sources: OMGBY, 13/77-2/8, September 1948, Economic Division (*BHA*).
[43] A blue collar with qualification gained about 40 RM per week. A civil servant with responsibilities earned a wage from 350 to 450 RM per month. The reform did not change the level of wages or prices when converted in Deutschmark although the money cash balances and debts were divided by 20.
[44] For example, the *Suddeutsche Zeitung* #25 of the 27 of March, 1948 discussed this topic and the issue # 43 of the 05/29/1948 reported the Clay’s intervention on this reform (Clay was the Governor of the U.S. zone). See also the document “Problems of Price and Market Policy”, 07/18/1947:”in these late spring months of 1947, discussions of currency reform (…) have reached a crescendo in the German press (…)” (4/77 2-1 Econ TC blatt 4/5, *IfZ*.
[45] In “Periodic report for week ending 18 September 1946”, 10/85 3/1 OMGBY, report of the U.S. det. in Augsburg (*BHA*)

Consequently, “the consensus opinion [on the proportion of the transactions that are cash as opposed to barter] seems to be that they are ‘mostly barter’.”[46].

This checks the idea that the black market was a “cash-in-advance” market. But this also changes our understanding of the motives explaining the RM acceptation on this market. As it lost its monopoly as a medium of exchange, it had to share this function with cigarettes and many other goods. In that case, what distinguished it from other goods sold on the black market was not its use as money (means of payment) but its quality as an asset, i.e. as a right to convert it against the “to-be-created” money. Note that this would have required people to believe that the authority would exert few controls on the origin of the money during the conversion process.

However, even if we accept these motives to demand cash, one would expect that, if they were important enough, all currency not traded on the legal market were to flow in on the black market. Regarding this, the increase in the stock of currency held by all banks of the U.S. zone during the period is striking (see figure 1). The decrease in the estimated money supply between 1945 and 1948 reinforces the difficulty to understand the increase in currency held by banks. According to Hansmeyer and Caesar (1976:418), the total stock of currency in circulation at the end of the war amounted to 70.3 billions of RM (about 40% of the 1944 GDP). Due to destructions and the creation of the Allied Reichsmark, it had increased by 8 billions at the end of 1947 (Gottlieb, 1956). However, only RM 8.8 billions in notes were effectively exchanged during the monetary reform of the 20th June, 1948.

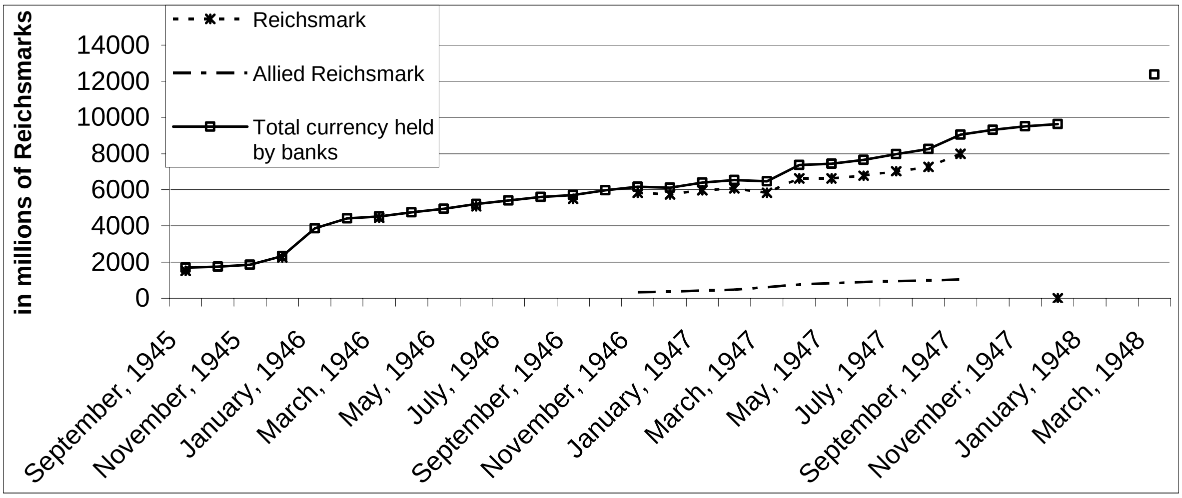

Figure 2: Currency held by all banks in the U.S. zone[47]

Hence, the continuous increase of currency held by banks seems difficult to reconcile with the idea that the black market was a money market. Moreover, it is striking that the path of currency deposit in banks increased just one or two months after the very strict exchange limitations imposed to U.S. soldiers in November 1945 by the Military foreign exchange bureaus.

[46] Report on “Inflation and Black Market in Germany” (no date of publication, although it contains black prices in Munich in October 1945), OMGUS FIN 17/5, BICO FIN Group, *IfZ*.
[47] In Monthly Report of the Military Governor, OMGUS, June 1946, March, June, July, August and December, 1947, April 1948, *IfZ*.

To conclude, it seems difficult to assert that the use of the RM explains the difference between the black and the grey market. We then have to look for another explanation of why each German did not choose to spend all his money on the black market.

II.2. Can Social Norms do the Job?

According to U.S. Army documents reporting Germans' view of illegal exchange, the difference between black and grey market lied in a moral difference regarding the goal pursued by traders in these two markets. "Morally, compensation trading has come to be widely accepted as 'self help', while black market trading is rejected as 'profiteering'" [48]. Menderhauser (1949:653) resumes the common impression when writing that "the great majority of households and businesses considered their involvement in black market transactions as shameful, and the agents of the black market as immoral and asocial individuals". But the grey market appeared as a "method of regular, well established business while black marketing is that of the 'fly by night' dealers, migrants and foreigners"[49].

It could hardly come as a surprise that, once going to the sources, one finds a huge difference in the type of population involved in dealing on these two markets. Data on some 1947 Bavarian black market participants computed by the Bavarian Price Police and reports of the U.S. Army indicate a clear-cut qualitative difference. In big cities, "today's black market exists largely because of the looting by Displaced Persons and, to a lesser extent, to the activity of troops in exchanging gasoline for eggs, butter and bacon in some areas" [50]. Another survey on black market in Garmish-Partenkirchen[51] reported that German Price Officials mentioned two other types of traders, i.e. "civilians working or staying with American organizations" and "Occupation Forces". In richer agricultural areas, data shows a great proportion of farmers intervening on the market, although it is unclear whether they would have classified their intervention as black or grey trade[52]. According to the German Price Authority of Vilshofen (Bavaria), 40% of black market participants were displaced persons (DP) from eastern territories (east of former Germany and soviet-zone exiles), 40% farmers, 10% shopkeepers and the last 10% were foreigners.

The difference made between black and grey market then seems to hinge upon a distinction in the type of population involved in each kind of trade. Black market trades were the result of actions of 1/ foreigners or displaced persons (DP) from eastern regions of pre-war Germany or from the soviet zone and 2/ people having lost their morality. The grey market hosted city dwellers and farmers and between relatives. Following Akerlof (1980), one can use this difference to construct a theory explaining this particular sorting of the population by a difference in the moral goal of people when engaging in trade.

[48] In "Problems of Price and Market Policy", 06/18/1947, OMGUS 4/77 2-1, econ T&C blatt 4/5, *IfZ.*
[49] In « Note on Price Control », 06/18/1947, OMGUS #4/77 2-1, econ T&C blatt 4/5, *IfZ.*
[50] "Survey of Price Control, Rationing and Black Market in all *Regierungsbezirke* in Bavaria except *Schwaben*, Report of a 1-week (15-22 June 1945)"; mark 1/177 3/8 Bico C+J, *IfZ.*
[51] Shelf mark 15/123 1/5 CID Blatt 2/2, Garmish (no date, no authors), *IfZ*
[52] OMGBY, FOD branch D #9/81 1/22 and OMGB-FOD branch D Vilshofen, 9/76 2/15 *von Landratsamt Vilshofen, Preisbehörde* (*BHA*).

To do this, assume that there exist two different markets, a black one and a grey one, and a moral code forbidding agents to trade on the black one but authorising trades on the grey one. There also exist two populations, one subscribing to that code of honours while the other does not. Let us name the first population the "believers" and the second one the "skeptics". For a believer, two different utility losses are associated with trade on the black market. The first loss is the pain the believer suffers from not conforming to his belief in the code. The second is the loss in reputation from disobeying the code that a believer encounters when observed by other tenants of the code. Of course, this second loss is a direct function of the proportion of believers: When nobody believes in the code, there is no reputation loss from exchanging on the black market.

Using these assumptions, one can easily understand the sorting of the population between the two illegal market. The agents who believe in the "moral code" do not trade on the black market if the psychological or social costs exceed the benefit from exchanging on this market. Assuming they have to trade, they choose to exchange on the grey market. On the contrary, a skeptic agent does not face any social cost, either psychological or social (reputational). This seems to fit the above description of the two different types of population involved in each trade. D.P. and foreigners do not pay any utility cost by dealing on the black market, as they do not belong to the community. Hence, the incentive of recent migrants to engage in black trade has to be lower than the one of "insiders" as they have no reputation to loose. But "insiders", when deciding which illegal market to trade on, have to take into account not only the utility from consuming a good but also the moral disutility associated to guiltiness or loss of reputation in their neighbourhood. This arbitrage was certainly less accurate for grey markets as the Allied Army had authorised and "encouraged" the creation of "legal barter market" for second hand goods[53]. Moreover, during the crisis, "the population is growing more accustomed to illicit trading and bartering."[54].

However, this "social norms" assumption cannot explain the origin of the coexistence between the black and the grey market since there are no explanations of the above assumed social code. It seems hard to argue that some black market aversion is part of some pre-existing "German code of honour". Note also that the condemnation of black market on the basis of profiteering is unsatisfactory in that case, as we can also exhibit cases in which people profiteer from exchange on the grey market. However, one can use the high level of prices on this market - as compared to the grey or white market - to provide an explanation of the origin of the moral condemnation of black marketing. As prices are endogenous variables in economics, one has to find the source of this moral condemnation in the actions that induces this huge difference in prices between these markets. According to this interpretation, the high level of black prices explains the existence of the moral condemnation of the black market, which, in turn can be a factor for the illegal market segmentation. This leaves us with the explanation of the reasons explaining the price differences between these two markets.

[53] The Monthly Report of the Military Governor of the U.S. zone, of February 1946 indicated that "The barter Ring has pioneered in a form of legal barter which has provided owners a ready outlet for commodities they wish to trade and customers a wide selection of items to choose from, all at pre-war prices." (p. 12-13, *IfZ*).
[54] Monthly Report 21 of the Military Governor, U.S. zone, Feb.-March 1947, p. 19, *IfZ*.

II.3. The Segmentation Comes from Difference in Enforcement of Law by the Police

To describe the existence of two competing markets, we turn to the micro-economics dealing with this issue. Section 1 showed that the exchange technology of the black market strongly differed from the grey one. Black market was mainly a centralised place organised by middlemen that fixed and posted the price at which they exchanged. Hence, when fixing their prices, middlemen took into account the effect of this action on the numbers of clients they would attract. Grey market was mostly a direct exchange market (without the help of middlemen), decentralised (people searched for a partner). Moreover, prices were mostly bargained, meaning that the output of the game partly depended on the agent's own characteristics. The population's basic knowledge of the existence of these two exchange technologies implies that we have to assume that during the crisis, Germans always faced the choice of trading on one of these markets.

Results in economic theory give us the intuition that we have to assume that the "centralised" exchange technology is more efficient than the "decentralised" one in that the information available for the trader is greater in the former than in the latter. The underlying idea is that competition has to be stronger when transaction costs are small enough. As an example, on a search market, the output of the negotiation depends on the outside option of a partner and when the cost of switching to another partner is small, the price paid tends to be closer to the competitive result.

We must also remember that the existence of some complementarities between the black and the grey market was the result of agents' actions. From a theoretical point of view, this complementarity means that there is some indirect exchange strategy that dominates the direct one. Nevertheless, this does not imply that this indirect exchange strategy has to be carried out through two different exchange technologies. This clearly shows that in order to account for the coexistence we must explain the coexistence of exchange technologies.

There are some theoretical works modelling the choice of agents between an intermediated market and a direct one (Gehrig, 1992; Yavas, 1996; Bignon and Breton, 2001)[55]. They model a population of agents endowed with the technology to produce goods having to choose 1/ their occupation (staying a producer or acting as middleman) and 2/ their exchange technology (once the intermediated market exists, on which market do they want to trade?). All choices are made by comparing their expected payoffs associated with both activities/exchange. Middlemen are specialised in trading and, to obtain profit and pay their functioning cost they charge a mark-up, a "bid-and-ask" spread. The price paid on the intermediated market is fixed collectively by middlemen[56] and posted. The price paid on the direct exchange market is negotiated and varies among pairs of traders.

[55] Gehrig is the first model to deal with this problem in a decentralised and game-theoretic context. Yavas generalises some results, mainly on price fixation. Bignon and Breton (2001) introduce production and endogenise the split of the population between middlemen and producers, which depends mainly on the price charged by the middleman. When presenting the results, we will mainly refer to Bignon and Breton (2001).

[56] Note that this assumption seems to fit well the above description of the black market functioning: "A few people made a killing on the black market. These were the *Grossschieber*, or big-time operators (...). They ran

The relevant results for our purpose are the following: the coexistence of both markets can exist if 1/ there is a transaction cost on the direct exchange market, as nobody will accept to pay to exchange with a middleman if direct exchange is costless; and 2/ some agents accept to become middlemen, implying that their profit is high enough to compensate their leaving their preceding activity and paying their functioning cost. This last point implies that there is a negative relationship between the size of the middlemen's clientele and the functioning cost: the greater the functioning cost, the smaller the number of clients.

This framework highlights some of the main features of the black and grey markets. As underlined above, the black market functions like the intermediated market while the grey market functions like the direct exchange one. For example, there exist some transportation costs on the grey market that do not exist on the black one. The functioning cost of the middlemen seems easy to interpret if we take into account the attempts of the police to enforce the price and rationing legislation. This enforcement policy entails the confiscation of goods sold and, sometimes, a fine. One can interpret this penalty as a risk premium that has to be charged to the client in order for the middleman to make a profit. This enforcement policy then has to increase the functioning cost of black marketeers since they could be more easily caught by the police than on the grey market.

This law enforcement begun just after the defeat, contradicting – at least for Bavaria - the idea conveyed by the concept of "*Stunde Null*", of a complete disorganisation of the German administrative body in the month following the defeat. There are many examples of police raids against the different Munich black markets during July and August, 1945[57]. The following report resumes these efforts[58]:

> "In the following time the Military Government applied its power to assist the Bavarian Police with the result that the black markets existing in Munich and on the *Viktualien Markt* were stamped out almost totally. The black market and the illicit trades are continually and severely supervised by the Bavarian police."

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illegal organisations. (...) Such men were the 'Price Commissars' of the underworld. They fixed the prices and kept order among the followers with the help of professional boxers." Botting, 1985, p. 181.

[57] See e.g. the archives of the *Innerministerium* of Bavaria, mark MInn #72571, *BHA*.

[58] Report of the August 9th 1945 for the Munich bezirk made by the *Regierungsprasident* of the *Preiseüberwachungstelle* to the Military Government, *Regierungsbezirk*'s Det. F1H2; mark **MWi 9621,** doc. 232/16937 (*BHA*)

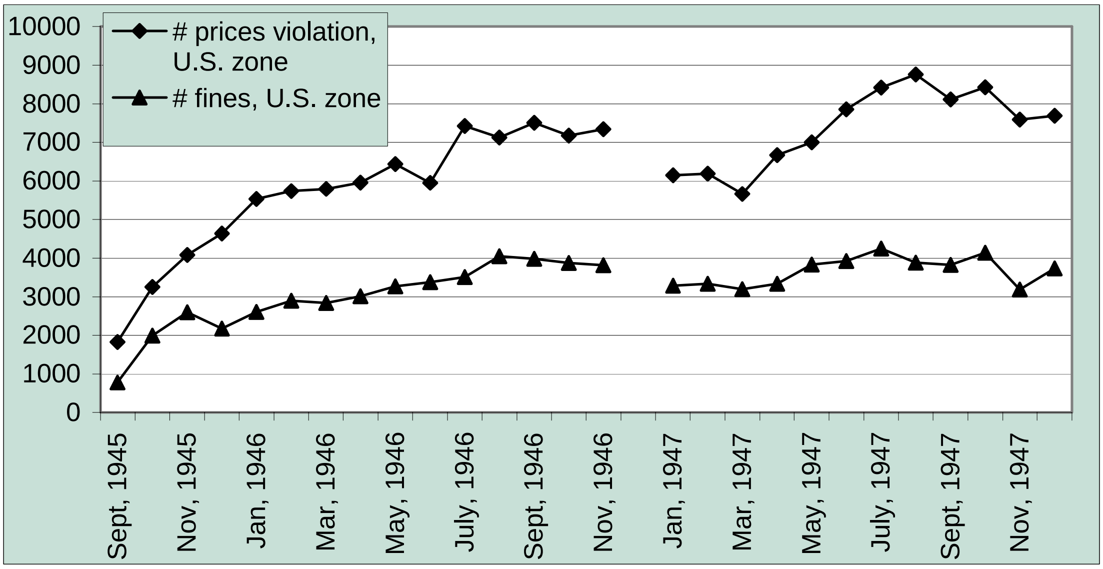

Figure 3: Numbers of prices violations and fines reported by the German price police to the U.S. occupation authority, U.S. zone[59]

This huge enforcement policy against open black market places resulted in an increase in the number of stated price violations (figure 3). Two remarks are worth noting concerning figure 3. The path of the number of price violations per month increased sharply during the first year of the occupation and continued to increase from 1947 on, although the growth rate decreased. The sharp increasing path of price violation between 1945 and 1946 may well correspond to the police effort to eradicate black markets. As we will see, the pattern of the curve in 1947 can indicate the effort devoted by the U.S. Army to improve its battle against the grey market. However, the decrease of price violations at the end of 1946 is striking as the method used by the U.S. Army seemed also to have changed[60].

The number of fines linked to illegal trades paralleled at a lesser extent the number of price violations until November, 1945. After this date, its growth rate seems much lower than the one of price violations.

One can guess that these police efforts not only had an effect on the size of the clientele of the black market but also on the organisation of the market itself. It created an incentive to trade in a more hidden way, i.e. to exchange in small towns, on the grey market… But it also tended to create a self-selection among black market participants[61]. Police reports indicated the difficulty of supervising black marketers' action. For example, it was impossible for the German Price Police to control a U.S. soldier dealing on the black market[62]. Second, the

[59] Data sources: Monthly Reports of the Military Governor, US zone, January 1947, April 1947; August-September 1946, November 1946, January 1948, *IfZ*.

[60] Monthly Report #17 of the Military Governor of the U.S. zone, November 1946: "Various measures have been instituted by the German price offices to combat black marketing. The press and the radio have been used to educate the public on the inflationary dangers implicit in price control violations. Road checks have been established and unannounced spot-checks of various industries have been made."

[61] Report of the 07/10/1945 (mark 1/177 3/8 BICO C+J, *IfZ*): "It cannot be emphasized too strongly that the D.P.'s are the most powerful motivating force behind the black market since they effectively block any action by the German Police."

[62] 15/123 1/5 CID Blatt 2/2 : Garmish (no date, no author) : "German offices however emphasize always that the efficiency of their activities will remain low as long as the following conditions exist : a/ It was found that

black marketers organised themselves to avoid the supervision of the police[63] and dealers organised themselves as a "mafia"[64].

As the enforcement of the price policy was easier in the city than in the countryside, some illegal trades moved to the countryside: "The practice [of price violation and rationing laws] is widespread and particularly prevalent in small towns and villages were enforcement is lax or non-existent" [65]. Moreover, those cases complicated the police's work since it was very difficult to prove that people contravened the law when the quantities held were small[66]. The control over grey trade between peasants and city dwellers also seemed to have been difficult to carry on[67]:

The U.S. authorities tried to compensate these problems in the police supervision. The Military Police thus became more and more involved in descending on black market places[68]. Trains begun to be checked by the police at their departure or arrival station [69].

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civilians working or staying with American organizations (...) are dealing on the black market to a great extent. Checking of those cases is not possible for the German police." The report of the Chief of the German Police of Stuttgart stated that "Proceedings against soldiers in uniform were of course entirely excluded." (07/18/1945, mark 1/177 3/8 BICO C+J, *IfZ*).

[63] Black market report #21 for week ending May 2 1947 stated that "Information continues to be received which indicates that many BM articles are shipped in Railways baggage cars either by passengers or by others persons who merely buy a ticket and then send the receipt to a receiver at the destination. BM operators boast that this is an infallible method since no check operations ever though the baggage cars and because baggage checked in a railroad station is never checked." (OMGUS C.A.D., 15/122-3/13, blatt 1, Headquaters counter Intelligence corp region 4)

[64] Report of the Chief of the German police of Stuttgart, (07/18/1945, mark 1/177 3/8 BICO C+J, *IfZ*): "A course of actions against the foreigners was hitherto impossible to the German police-control-officials who appear in civilian clothing and are unarmed. The least attempts to proceed against civilian foreigners are attended with a concentration of these persons who occupy at once a hostile attitude against the officials and Russians dressed in uniform lend them assistance. So for instance, the German price control official Zörrgiebel was on the 5th of July recognized by some foreigners, affronted and threatened. Two Moroccans who have called by the foreigners for assistance charged their guns in all publicity and carried Zörrgiebel away under the applause of the multitude. (...) The hostile position against the officials in most cases compelled them to pursue the buyers and to make the necessary statements out of sight of the foreigners."

[65] Report on "Inflation and the Black Market in Germany", fall 1945, *IfZ*.

[66] Weekly BM report #14 for the week ending March 15, 1947: "Examples such as these prove to be extremely hard cases to prosecute in the Courts due mainly to lack of evidence as to the illegal source and use of the goods." (15/122 3/19 CAD 1/3, *IfZ*).

[67] "The influx of black marketeers and their wares form British and French Zones continues. All agencies interested in investigating and controlling black market activities considered this [as] the most difficult in that facilities and personnel are inadequate to check the movement of this type of operator." (ibid).

[68] 10/85 3/1 OMGBY Periodic report for week ending 11 September 1946: "A raid to smash black-market near the Hauptbahnhof in Munich was carried out by the 508th MPs, at 1800 hours on 24 August 1946. The raid was covered by an Agent of the Munich SubRegional Office, dressed in civilian clothes to study the reaction of the German civilians involved. The raid was conducted excellently."

[69] The document mark 15/123 1/5 CID (*IfZ*) indicated the following "Survey of illegal transportation of food form the American Zone : 57 passenger trains checked by the US army (and 105 not checked). 30% of passengers were checked. Average amount each held by each person checked: 27.5 lbs of food and 2 lbs of tobacco. Estimated goods leaving *Kreis* during the month of November: 354.75 ton.

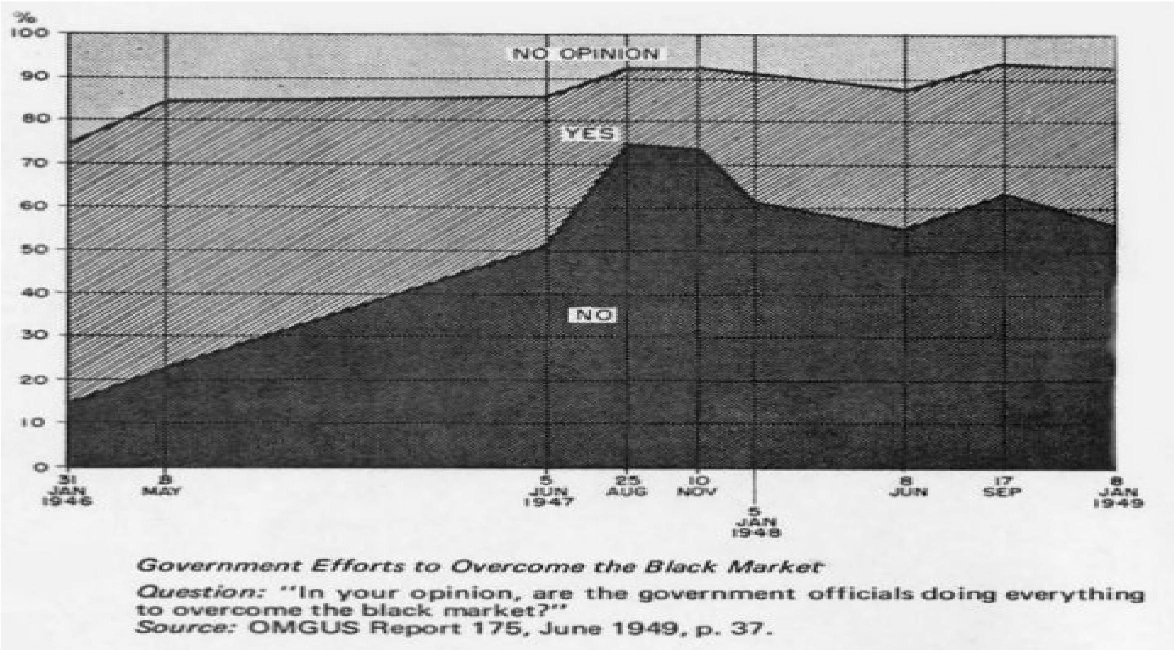

Figure 4: Survey of perceived government officials' effort to overcome the black market[70]

However, figure 4 underlines that "Confidence in local officials' effort to stop black marketing declined sharply from January 1946 (60%), to September, 1947 (19%) but appears gradually to be rising. In January 1948, 30% thought local officials were doing all they could to overcome it. A year later, this figure has risen to 36%"[71]. This indicates that although the Authorities exerted huge efforts to eradicate illegal trades, the forms they took changed sufficiently to adapt themselves to escape police repression. This logically induced a prominent position for grey trades (that were harder to control) but also, as the control technology was asymmetric, the intermediated nature of black trade to immune (partly) sellers from the cost of being caught and punished. Therefore, to maintain their profit, they charged higher prices on the open black market so that prices incorporated some risk premium (to compensate black market traders for the risk taken when intervening on it).

Conclusion:

In this paper, we suggest an explanation of the coexistence of two different markets for illegal exchanges in Germany. This research can also help to determine whether the prevalent pattern of exchange could have had an effect on output. The enforcement of price and other economic controls barred inflation at the price of the destruction of the illegal organised market. Thereby some of the positive effects of competition on prices could have been lost. As noted in many allied reports on the economic situation, it seems that the prominence of the grey market over the black market contributed to prices losing their economic function as a way to allocate efficiently goods and labour among firms and among firms and consumers. Most illegal exchanges were carried on through a "search" market with

[70] Cited in Merritt et al. (1970), p. 22.
[71] OMGUS ICD, Trends in economics, *IfZ.*

high transaction costs. According to economic theory, this should have affected agents' decisions. However, the distortions implied by this pattern of exchange are still to be documented and measured.

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