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THE COMMON AGRICULTURAL POLICY, SMUGGLING, AND
THE TWO PERCENT LEVY OF 1979

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I thank J. Peter Neary for helpful suggestions, not all of which have been incorporated in the present preliminary paper. I also acknowledge the Ford Foundation for financial support.

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I. INTRODUCTION

In October 1982 three butchers and a livestock exporter took the Government of Ireland to the Irish High Court. Their contention was that a 1979 Irish Government levy on agricultural produce, by influencing trade flows, contravened the Treaty of Rome and was therefore illegal. This paper draws on earlier work (Norton, 1983) to assess the plaintiffs' case. In fact, the issues raised herein were among the principal contentions pursued for the plaintiffs in court (Norton, 1982).

The levy under consideration is the tax of 2 per cent imposed in 1979 on the value of cattle slaughtered in the Republic or exported therefrom. It was to apply from 1 May to 31 December 1979 and was to be administratively payable by slaughterers and cattle exporters. It is important to note that cattle imported from Northern Ireland were exempt.

* I thank J. Peter Neary for helpful suggestions, not all of which have been incorporated in the present preliminary paper. I also acknowledge the Ford Foundation for financial support.

1 See Statutory Instruments 152 and 153 of 1979. A similar levy was applied to fresh milk, cereals and sugar beet.
from the levy.

As is indicated by a letter from the Government of Ireland to the EEC Commission, the levy was introduced against a background of rising farm incomes given an underdeveloped agricultural tax base, "as a temporary measure which would operate until the Government had decided on a definitive tax system for agriculture after discussions with the farming community."\(^2\) Thus it is clear that it was intended that the incidence of the tax would be on farmers, pending the design of mechanisms for extending the income tax system in that sector.

It is widely recognised, by the EEC Commission, by Member State governments and by traders, that the EEC's green currency and MCA system has led to widespread distortion of markets and to smuggling of CAP products on a massive scale.\(^3\) That has been especially the case in trade between Northern Ireland and the Republic of Ireland (henceforth denoted by NI and RI respectively). It will be shown below how the Two Percent Levy acted like the MCA cross-border tax-subsidy system, and therefore caused trade deflections similar to those caused by the agri-money system.

\(^2\)Quoted by Justice Barrington (1983).

It is accordingly necessary to dwell a good deal on the MCA system.

II. MCA'S AND MARKET ORGANIZATION

1. MCA's

Official EEC CAP prices (guide prices, intervention prices etc.) have been set, not in terms of national currencies, but in terms of the Unit of Account (UA) until March 1979, and in terms of the European Currency Unit (ECU) since then. Thus the ECU is the **numeraire** of the CAP's pricing system. When expressed in terms of national currencies, official CAP prices are calculated as: (price in terms of the numeraire) multiplied by (exchange rate between national currency unit and the numeraire, i.e., the number of units of national currency equal in value to one unit of the numeraire). The expression in the second set of parentheses denotes the "green" or representative rate for a currency.

Market exchange rates within the EEC have varied since Ireland and the UK joined the Community on 1st January 1973. If green exchange rates had varied along with market exchange rates, then the national currency prices of CAP products would have varied in the same way as the prices of internationally traded goods generally are affected by exchange rate changes: a depreciation of a country's green exchange rate (in line with
its market rate) would have raised official CAP prices, in terms of domestic currency, in the country concerned; vice versa in the case of a revaluation or appreciation. However, green exchange rates have not always varied in line with market rates. Instead, periodic changes in green exchange rates were made, following in lagged fashion changes in market exchange rates. The gap between the green rate and the market rate has been bridged by MCA taxes and subsidies. For weakening currencies, where the market exchange rate has depreciated relative to the green rate, the MCA's have operated as a tax on exports and a subsidy on imports (the case of negative MCA's); vice versa in the case of strengthening currencies, where the market rate has appreciated relative to the green rate (the case of positive MCA's).

Because the UK and RI had the same market exchange rates and because their green rates were also equal over the period January 1973 - September 1974, no MCA was then applied on CAP product trade between them. But the green rates for both sterling and the Irish pound were devalued with effect from 7 October 1974, and, because the devaluation of the Irish green rate exceeded that of the UK, official CAP product prices in RI increased by over 3 per cent in excess of those in the UK. This meant that MCA's were introduced on trade between them. These took the form of net subsidies on RI CAP product exports to the UK, and net taxes
on flows in the reverse direction.

Sterling and the Irish pound continued to depreciate against other EEC currencies in the years immediately following 1974. Reflecting its own interests as a large net exporter of CAP products (and hence favouring high food prices) RI mirrored the market depreciation of the Irish pound by way of a lagged sequence of green pound devaluations. But the UK, also reflecting its own interests - as a large net importer of food (and hence favouring low food prices) - resisted pressures from the EEC Commission to devalue its green rate. The result was a calculated MCA subsidy of about 25 per cent on RI CAP product exports to the UK throughout 1977. That simply reflected the fact that, in terms of national currencies, official CAP prices were about 25 per cent higher in RI than in the UK.

Because of its subsequent appreciations, sterling has normally been a positive MCA country since early 1980. RI, on the other hand, has been a zero MCA country in recent years. Hence, since early 1980, an MCA tax has normally been levied on RI CAP exports entering the UK, whilst an MCA subsidy has normally applied on movements in the reverse direction. These merely reflect the percentage excess in the official CAP price level in RI over the corresponding level in the UK, in terms of national currencies and using market exchange rates.
2. Market Organization

The pieces of the jig-saw of the CAP for beef and veal, which had been fitted together in 1967/8, ostensibly created a system which rested on three fundamental corner stones:

(i) Common organization of markets and joint financing of support measures. In essence this meant that the same prices were to be guaranteed to food producers across the Community. The only differences between market prices (it was intended) would be accounted for by transport costs and differing markups as produce moved from surplus to deficit areas.

(ii) Free trade between Member States. As stated in Regulation 805/68, "the establishment of a single market in beef and veal involves removal at the internal frontiers of the Community of all obstacles to the free movement of the goods in question".

(iii) A single trading system with non-member countries. In practice this meant protection against unduly cheap imports, by means of common customs duties and variable import levies, and subsidisation of surpluses upon export to non-EEC countries.

The Guide Price for fat cattle is the key to the EEC price support system in the beef and veal sector. In itself, it has no mandatory force: it is the average price (in ECU's) which it is felt should be realised throughout the marketing year for fat cattle sold for slaughter. Each week average wholesale or
reference prices for adult cattle are collected. Subject to qualifications, the relationship between Guide and reference prices has determined whether intervention support was available. An Intervention Price for live cattle has been set for each marketing year at levels slightly below the Guide Price. Market prices have been regulated by intervention operations, by the Common External Tariff and variable import levies, by export subsidies and by EEC aids for the private storage of beef at times of surplus.

The application of the CAP's price support system in the beef and veal sector has been far more complex than the above details might suggest. Of particular relevance in the Irish context have been the Variable Premium (VP) System developed by the UK largely as an alternative to intervention, and subsidies at point of slaughter under the Meat Industry Employment Scheme (MIES), introduced in NI to counter smuggling activity which the agri-monetary system actively but unintentionally encouraged.

III. VP, MIES, AND SMUGGLING

Although RI has made very heavy use of the intervention system, the UK has done so only to a marginal extent. Rather, as from November 1974, the UK has used the VP system. The UK, in its quest for cheap food, regarded intervention as a "high price"
means of supporting farm incomes; the VP system, by contrast, was a "low price" means of income support. It was and still is a system of deficiency payments, made to producers around time of slaughter, under which target prices for fat cattle have been set on a weekly basis; if average weekly market prices were less than the weekly target price, a VP was paid to fill the gap. The details of the system have been such that when a VP was payable in the UK over the 1974-80 period, the rate of payment was generally higher in NI than in Great Britain (GB). At the same time, RI beef exported to the UK was eligible for the VP applicable in GB only.

The difference in the VP payable to NI and RI meat factories became a point of contention between NI and RI interests, because it created problems for RI processing plants in competing for cattle on the RI market, and diverted cattle into NI for slaughter there.

In the period October 1974 to 1976, and prior to the build-up of MIES slaughter subsidies in NI (mainly in 1977), RI cattle going to NI went through legal channels (because net MCA subsidies applied). But the MCA system also greatly encouraged the movement of cattle from NI to RI through illegal channels (because net MCA taxes applied on legal trade in order to nullify the attractiveness of higher, in terms of national currencies, official CAP product prices in RI). Thus it
appears that there was large-scale unrecorded movement of cattle southwards in 1976. To prevent the drain southwards of NI herds induced by the agri-monetary system, the UK reacted by introducing large subsidies under the MIES on cattle slaughtered in NI, as from 25 October 1976.

The British Treasury had sought justification for the MIES late in 1976 and accordingly instructed the Department of Agriculture for NI to appoint an independent body to investigate its operation. They opted for PA Management Consultants (PAMC) who presented their report, Green Pound, Differential and the Northern Ireland Meat Industry, in February 1977. Much of that report concerned the effects of the agri-monetary system in the absence of a MIES-type subsidy system.

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5. The MIES had been in operation on a temporary basis, and at relatively low rates of payment, from 28 April 1975 to 12 July 1975 and throughout the first half of 1976. It was a nationally financed system of subsidies implemented in an emergency situation without any prior approval from the EEC Commission. As initially implemented, it therefore contravened CAP regulations. It subsequently received the Commission's sanction.

6. I am grateful to the Department of Agriculture for NI for making a copy of this report available to me.
Reflecting the higher prices obtainable in RI, legal movements of cattle from NI to RI attracted MCA levies standing at about £60 per head for fat cattle in January 1977. In the view of PAMC and in the absence of MIES-type measures in NI, "there is little doubt that a large proportion of available Northern Ireland supply would move South .... It would be unrealistic to assume that such illegal movements could be halted given this level of incentive .... If cattle can be moved in lots of 30 head, the present (NI slaughter) throughput levels of approximately 7,400 cattle per week would require some 250 movements. This is equivalent to approximately 36 movements per day, or less than two per hour across the border. Given the length of the land border ... this extent of movement is considered to be feasible.... The machinery exists, or could be rapidly brought into existence, to smuggle the whole production of cattle and pigs to the Republic. Recent experience indicates that in the absence of attractive Northern Ireland prices, the NI producer will take advantage of the services offered by the smuggler." (pp. 3, 39, 40).

In regard to future policy, for as long as there was an MCA wedge operating as a net subsidy on RI exports to NI and as a net tax on movements in the reverse direction, PAMC concluded that "the MCA's have distorted the legal export trade, and the MIES has prevented the development of large-scale smuggling .... The removal of the MIES would
result in extensive illegal movements of fat cattle and pigs to the Irish Republic. The Northern Ireland export trade in both beef and pigmeat would virtually cease within a short time, probably in a matter of weeks .... Smuggling would rapidly become a highly developed illegal industry if the MIES were removed." (pp. 54, 56, 57). PAMC accordingly recommended that the MIES be retained, and this was accepted by the UK government.

Following the PAMC recommendations, the MIES was extended from time to time so that it was in operation almost continuously until January 1980, when both RI and the UK had zero MCA's. Throughout the period the rate of subsidy payable under the MIES approximated the calculated MCA, which in turn reflected national currency CAP price differentials between RI and the UK. That remained the case even after MCA's on live cattle in trade between NI and RI were suspended in 1977 (see below).

We have seen that by the spring of 1977 RI cattle going to the UK obtained very large MCA subsidies. However they were also entitled to receive the NI MIES after completing a domiciliary period in NI. (GB did not have a MIES). These factors in combination created an artificial demand for the export of store cattle from RI to NI - a reversal of net trade flows - and put RI meat factories at a disadvantage
in obtaining their raw materials: the deflection of RI cattle for finishing in NI left RI meat factories (rather than their NI counterparts as previously) drained of supplies. The EEC's response to this situation was by way of Regulation 1260/77 of 13 June 1977, under which MCA's on trade in live cattle between NI and RI were suspended for as long as the MIES was operated in NI. The preamble to that regulation stated: That exports of live animals from NI to RI had increased greatly (the preamble does not indicate whether, in the Commission's view, these were mainly legal or illegal but we can take it that large numbers of them were smuggled into RI) because of higher prices as expressed in national currency in RI due to exchange rate changes since 1974; that in order to alleviate the difficulties which this (presumably the reference here pertains to ensuing smuggling ex NI into RI) entailed for meat factories in NI, the Council of Ministers, by a decision of 14 March 1977, had authorized the UK to grant the MIES slaughter subsidies in NI; that the combined effects of the MIES, and MCA subsidies ex RI into NI, had caused the latter trade flow to reverse, i.e. from RI to NI; that these were "helping to increase trade movements which do not reflect real market requirements"; that by suspending the MCA's on live animals such difficulties could be avoided and that the suspension of MCA's on the live NI/RI cattle trade would be
compensated by the MIES. Hence, the regulation laid down that MCA's on live cattle in trade between RI and NI would be suspended for as long as a subsidy under the MIES was in operation at slaughterhouses in NI. The regulation came into force on 15 June 1977.

The MIES in NI was endorsed by the EEC so as to counter drains on NI cattle herds into RI which the higher official CAP prices in RI would have otherwise induced, mainly by way of smuggling, thereby evading the MCA charges which were meant to prevent such deflections. As sterling appreciated in the late 1970's (both before and after the Irish pound's break from a fixed parity with sterling in March 1979) local-currency-equivalent official CAP prices in NI and RI converged, thereby tending to obviate the rationale for the MIES in NI. Due to adjustments in its green exchange rate, RI has maintained a zero MCA since late in March 1979. However throughout most of 1979 RI exporters still obtained an MCA subsidy (other than where it was suspended, i.e., on live cattle exports to NI) on exports to the UK. The appreciation of sterling led to the removal of all UK MCA's in the beef and veal sector as from 28 January 1980. Since then no slaughter subsidies under the MIES have been payable; therefore, MCA's on trade in live cattle between NI and RI have no longer been suspended. And since 28 April 1980 the UK has
generally had positive MCA's.

The switch from negative to zero and then to positive MCA's in the UK meant a complete reversal of the scenario applicable in the 1974-77 period: RI exports to NI now faced MCA taxes reflecting higher official CAP prices in NI than in RI in terms of local currencies, given market exchange rates. Symmetrically, subsidies were available on NI exports to RI. Thus the direction of smuggling reversed completely: strong incentives now emerged to smuggle cattle for slaughter in NI. Partly because of this (but also due to high levels of EEC export subsidies on RI cattle sent to North Africa) the RI processing industry was drained of supplies and was forced onto a 3-day working week for much of 1981. We have seen that when the boot was on the other foot in the mid-1970's, the UK introduced the (nationally financed) MIES to maintain supplies to processors. However RI did not react in a similar manner when the RI industry was being drained of supplies in 1980 and 1981.

IV. MCA'S AND SMUGGLING: EMPIRICS

For a summary of smuggling activity ex RI into NI, induced by the agri-monetary system in 1981, see Norton (1983), pp. 120 - 129. MCA taxes on RI cattle exports to NI (and subsidies on movements in the reverse direction) averaged
10.5 per cent over the year. Estimates of induced smuggling are high. The Irish Livestock and Meat Board estimated in its Annual Review of 1981 (p. 1) that between 110,000 and 140,000 cattle had been smuggled northwards in 1981. The relative magnitude of this estimate can be seen by noting that recorded live cattle exports to all markets in 1981 came to 425,000 head. Thus, according to the Irish Livestock and Meat Board, over 20 per cent of all live cattle exports from RI in 1981 were smuggled into NI.

Given cattle herd sizes, changes in MCA levels would not be associated with changes in recorded trade if all movements were through legal channels. That is because MCA border taxes and subsidies simply bridged the gap, in terms of national currencies and given market exchange rates, between official CAP prices in NI and RI.

The agri-monetary system does not just cause smuggling within an existing volume of trade but also causes deflection of trade from one market to another. For example, consider the year 1981 when MCA taxes on RI exports to the UK averaged 10.5 per cent. Large-scale smuggling ex RI to GB or continental EEC is an operational impossibility. But in the case of RI and NI, "This frontier is difficult to patrol and gives scope for clandestine trade .... There is a single market in live cattle
in these two regions owing to their structural, geographical and political circumstances". Thus the MCA system presumably caused market distortion by deflecting cattle away from the GB and continental markets and into NI; however, by its very nature, such deflection would not have been recorded in the RI/NI trade statistics.

On *a priori* grounds we expect that an increase in MCA taxes on RI exports to the UK will cause an increase in actual RI exports to NI but a decrease in recorded exports to that market, whereas, on the other hand, MCA subsidies on RI imports will generate an increase in recorded imports to RI from NI. However, in order to test these propositions in the light of empirical data we need to relate recorded cattle movements across the border to most of the possible principal determinants of such movements. Having assessed the role of the MCA system in the light of empirical data we will then proceed to the Two Percent Levy, which was similar to an MCA.

In an earlier study Norton (1983) made the following regression estimates for recorded RI/NI trade in live cattle using monthly data over the 93 month period January 1974 to September 1981, inclusive. Partly due to ignorance of the

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details of the Two Percent Levy at the time that the latter research was in progress, and because it was in force for only eight months, no account was taken of the Two Percent Levy in that study.

**Table I: Export Equations**

1. \[ X = a_1 + 228 S + 40 I + 74 V - 2 \text{ RM} + 15 \text{ CS} - 76 \text{ CN} \]
2. \[ X = a_2 + 188 S + 56 I + 161 V + 9 \text{ RM} + 16 \text{ CS} - 64 \text{ CN} \]
3. \[ X = a_3 + 260 S + 26 I + 140 \text{ VL} + 38 \text{ RML} + 17 \text{ CS} - 86 \text{ CN} \]
4. \[ X = a_4 + 236 S + 41 I + 281 \text{ VL} + 44 \text{ RML} + 16 \text{ CS} - 70 \text{ CN} \]
5. \[ X = a_5 + 203 S + 23 I + 120 V + 17 \text{ RM} + 17 \text{ CS} - 71 \text{ CN} \]
6. \[ X = a_6 + 240 S + 16 I + 218 \text{ VL} + 33 \text{ RML} + 16 \text{ CS} - 72 \text{ CN} \]

**Table II: Import Equations**

1. \[ M = b_1 - 296 S + 87 I - 52 V + 60 \text{ RM} - 14 \text{ CS} + 96 \text{ CN} \]
2. \[ M = b_2 - 239 S - 41 I + 23 V + 111 \text{ RM} - 9 \text{ CS} + 74 \text{ CN} \]
3. \[ M = b_3 - 297 S + 87 I - 77 \text{ VL} + 58 \text{ RML} - 14 \text{ CS} + 95 \text{ CN} \]
4. \[ M = b_4 - 229 S - 51 I + 133 \text{ VL} + 119 \text{ RML} - 9 \text{ CS} + 71 \text{ CN} \]
5. \[ M = b_5 - 220 S - 24 I + 10 V + 98 \text{ RM} - 10 \text{ CS} + 72 \text{ CN} \]
6. \[ M = b_6 - 214 S - 30 I + 98 \text{ VL} + 103 \text{ RML} - 9 \text{ CS} + 71 \text{ CN} \]

**Table III: \( B = X - M \), Net Export Equations**

1. \[ B = c_1 + 507 S - 50 I + 115 V - 94 \text{ RM} + 23 \text{ CS} - 130 \text{ CN} \]
2. \[ B = c_2 + 476 S + 71 I + 151 V - 105 \text{ RM} + 25 \text{ CS} - 134 \text{ CN} \]
3. \[ B = c_3 + 429 S - 60 I + 178 \text{ VL} - 48 \text{ RML} + 26 \text{ CS} - 135 \text{ CN} \]
4. \[ B = c_4 + 396 S + 51 I + 161 \text{ VL} - 39 \text{ RML} + 28 \text{ CS} - 140 \text{ CN} \]
5. \[ B = c_5 + 376 S + 29 I + 117 V - 74 \text{ RM} + 25 \text{ CS} - 125 \text{ CN} \]
6. \[ B = c_6 + 307 S + 24 I + 135 \text{ VL} - 40 \text{ RML} + 27 \text{ CS} - 125 \text{ CN} \]
The variables are defined as follows:

**X**: Number of cattle recorded as being exported from RI to NI.

**M**: Number of cattle recorded as being imported to RI from NI.

**B**: Recorded net exports of cattle, number, from RI to NI.

**S**: Net MCA percentage subsidy on RI exports to NI and the symmetric tax on RI imports from NI. This variable had a negative value at times when RI exports to NI were taxed (since a tax is a negative subsidy).

**I**: Excess of RI intervention price over NI reference price, in terms of £ sterling and using market exchange rates, as a percentage of the NI reference price.

**V**: Excess of the NI rate of VP over the GB rate of VP, as a percentage of the NI reference price.

**RM**: Rate of subsidy in NI under the MIES, as a percentage of the NI reference price.

**CS**: Cattle herd, numbers, in RI at beginning of year.

**CN**: Cattle herd, numbers, in NI at beginning of year.

As explained in Norton (1983), VL and RML involve adjustments to the V and RM time series. The \(a_i\), \(b_i\) and \(c_i\) terms are constants.

In estimating equations 1 and 3 in each table, no adjustment was made to the raw data for the dependent variable to take account of seasonality. Equations 2 and 4 are the same as equations 1 and 3, respectively, except for the fact that monthly dummy variables were specified in recognition of seasonality. In the case of equations 5 and 6, the raw data for the dependent variable was deseasonalised using the X-11 procedure of the US Bureau of the Census.
The fit of these equations, which involved transformation for autocorrelation, was unimpressive: 0.64 was the highest value obtained for the $R^2$ statistic. The variables $S$, $CS$ and $CN$ have their expected signs in each equation. However, only one variable - $S$, the percentage rate of net MCA subsidy on RI exports to NI and the symmetric tax on RI imports from NI - both had its expected sign and was statistically significant (using a one-tailed test, as appropriate) at the 95 per cent level in each of the 18 equations. Indeed, $S$ was statistically significant at the 99 per cent level in the overwhelming majority of cases.

The average value of the coefficient of the MCA variable $S$ in each of the 6 export equations is 226. According to that estimate, and other things being equal, every 1 per cent of net MCA subsidy on RI exports to NI over the period January 1974 to September 1981 induced increased exports of 226 RI cattle per month to NI, while, symmetrically, every 1 per cent of net MCA tax (implying a negative sign for $S$) on RI exports to NI over the same period induced a reduction in recorded cattle exports to NI of 226 per month.

For given herd sizes, there is no reason why actual RI cattle exports to NI should fall when the rate of MCA tax increases, since an increased rate of MCA tax simply
reflects an increase in official CAP product prices in the UK relative to those in RI. However, the increased MCA tax would imply increased profitability of exporting cattle through illegal channels. Thus the interpretation of the average coefficient of $S$ in the 6 export equations in Table 1 is that on the basis of data for 1974 - 1981, and for the moment taking actual exports to NI in any month as given, every 1 per cent of MCA tax generated smuggling of 226 cattle per month from RI into NI. However, that is very much a lower bound estimate as it does not take into account deflection of cattle, away from export to non-NI markets, into NI, due to the relatively increased profitability of supplying the latter market through illegal channels.

The relative significance of the estimate of 226 can be seen as follows: Taking for example the first 9 months of 1981, recorded RI cattle exports to NI, seasonally adjusted, were 53,692 head. The average rate of MCA tax on RI exports to NI was 12.1 per cent over the same period. The parameter estimate of 226 suggests that if the MCA tax had been zero, 24,815 extra cattle over the 9 month period would have appeared in the seasonally adjusted export figures. On the very plausible inference that those cattle were smuggled into NI to avail of the higher prices obtainable there (which the MCA taxes sought to nullify), we would conclude that the
green currency system was responsible for estimated smuggling of about 25,000 cattle \textit{ex RI} into NI in the first 9 months of 1981. We note that such an estimate would fall far short of the estimates of RI meat trade interests (Norton, 1983, pp. 120 - 129) and of the Irish Livestock and Meat Board (at least 90,000 in the first 7 months of the year - see Norton, 1983, p. 127). However the figure of 25,000 is an underestimate of total smuggling \textit{ex RI} into NI, as it does not take into account deflection of RI cattle exports away from non-NI markets, due to the green currency system and given the opportunities for smuggling. If, in line with the estimates of the Irish Livestock and Meat Board, about 100,000 cattle were smuggled into NI in the first 9 months of 1981, then we would infer that over the same period about 75,000 head of RI cattle were deflected, away from other markets, and smuggled into NI due to the relatively increased profitability of supplying that market illegally.

Subject to negligible exceptions over the years, all cattle imports to RI have been from NI. Sign reversals appear for the parameters of the \( V \), \( VL \) and \( I \) variables in the 6 import equations in Table II, while that of \( RM \) has the "wrong" sign in each equation. However these were statistically insignificant in most cases. The key policy variable determining recorded RI cattle imports from NI is again the MCA variable \( S \). The
average value of the coefficient of the MCA variable S in the 6 import equations is 249. According to the latter estimate, and other things being equal, every 1 per cent of MCA tax on RI imports from NI over the period January 1974 to September 1981, induced a reduction of 249 in recorded imports of NI cattle per month into RI. Likewise, every 1 per cent of MCA subsidy on RI imports from NI over the same period induced an increase of 249 monthly cattle imports from NI to RI.

The equations for net exports to NI, \( X - M = B \) in Table III, give results consistent with those found for the export and import equations.

If all movement of cattle were through legal channels, and if it caused no distortion of markets, the green money system as represented by the MCA variable S (along with data on herds - CS and CN) would not be able to "explain" much of recorded trade in cattle between RI and NI. The reasons why it does so are straightforward. Thus consider a month when there was, say, a 10 per cent net MCA tax on RI exports to NI; there would then be a 10 per cent subsidy on movements in the reverse direction. Under those circumstances, and using national currencies and market exchange rates, the official CAP price level would be 10 per cent higher in NI than in RI. The incentive would then be to smuggle RI cattle into NI, thereby evading the 10 per cent tax. Thus
RI exports to NI would be underrecorded. In fact, RI exports to NI would have increased, due to deflection of RI cattle away from non-NI markets in favour of NI, where smuggling would maximize the return across markets. But under the same circumstances, cattle moving ex NI into RI would go through legal channels, thereby collecting the MCA subsidy. The reverse scenario would apply at times when there was a 10 per cent MCA subsidy on RI exports into NI and a symmetric 10 per cent tax on NI exports to RI.

V. THE TWO PERCENT LEVY AND SMUGGLING

Given that RI and NI are in effect a single market by virtue of smuggling and other forms of arbitrage, the Two Percent Levy of May - December 1979 had to operate somehow like an MCA subsidy on RI imports from NI. Thus it would have had the effect of inducing smuggling of cattle into NI. That smuggling would have had two aspects:

(i) Leaving aside for the moment the question of deflection/distortion as between markets, the Two Percent Levy, like an MCA levy, would have caused part of existing RI cattle exports to NI to move through illegal channels. On that count actual exports to NI would be underrecorded.

8 *Commission of the European Communities (1978), Annex C, pp. 7, 8.*
(ii) Given the option of smuggling into NI and the absence of that option in exporting to GB or to other EEC countries, and given that the NI market cannot be insulated from that of RI, the Two Percent Levy had to have the effect of deflecting some RI cattle exports away from, say, the GB market, towards NI. That is because the Levy would have had to be paid on exports to GB but, due to the smuggling option, it would have been evaded on (deflected) exports to NI, thereby raising the net rate of return on the NI market as compared to the GB market. However, such deflected illegal exports to NI would not have been recorded. On the import (into RI) side, the Two Percent Levy would have affected RI imports more strongly than an MCA subsidy. Thus NI cattle imported and slaughtered within two weeks in RI were exempt from the Levy, whereas RI cattle for slaughter in RI were subject to the Levy. Thus the Levy inevitably distorted source of supply for RI slaughterings by generating an increase in imports of cattle from NI to RI for slaughter there. To deny the latter conclusion is to deny the existence of markets. (It may be wondered why a levy as small as 2 percent would cause any substantive increase in RI imports from NI. The answer can be seen as follows: Consider a meat processor in, say, County Louth, RI, adjacent to NI. If he brought a truck-load of 30 fat
cattle in, for example, Mullingar, RI, and if the incidence of the Levy were entirely on him, then, making the conservative assumption that the cattle were worth £500 Irish per head, he would be liable for a clear £300 in taxes. The same sum could have been saved on a similar truck-load if market prices were the same in NI as in RI, and if he bought the cattle just across the frontier in, say, County Armagh, NI. Note that it is not necessary to assume that the entire (or even the greater part of the) incidence of the Levy was borne by the meat processor in the above example in order to establish the point.

The obvious a priori conclusions in the immediately preceding paragraphs are fully validated when one examines the equations tabulated in Tables I to III above, and the empirically recorded NI/RI trade data for May - December 1979. Because of the a priori reasoning above, and given the absence of a variable representing the Two Percent Levy in the 3 sets of equations, one expects that:

(i) Each of the 6 export equations tabulated in Table I will overpredict recorded exports to NI over the period May - December 1979. That is because those equations take no account of the added incentive to smuggle northwards, thereby evading the Levy. The a priori expectation on this matter is fully confirmed when one examines the entries for months 65 to 72 (i.e. May to December 1979), under the
headings "observation number", "observed value" and "predicted value", in the computer printouts for the 6 export equations.

(ii) One also expects that each of the 6 import equations in Table II will **underpredict** recorded cattle imports into RI over the period May - December 1979. That is because those equations take no account of the added attractiveness of (legally) importing from NI for slaughter in RI (thereby avoiding the Levy) in May - December 1979. The expectation in that regard is also confirmed when one examines the entries for months 65 to 72 (May - December 1979), under the headings "observation number", "observed value" and "predicted value", in the computer printouts pertaining to the import equations.

(iii) Finally, one would expect that each of the 6 net export equations tabulated in Table III will **overpredict** recorded net exports to NI in the period May - December 1979, reflecting the manner in which the Two Percent Levy distorted both recorded exports and recorded imports. Again the **a priori** expectation is fully confirmed when one examines the entries for months 65 to 72 under the headings "observation number", "observed value" and "predicted value" in the computer printouts pertaining to each of the net export equations.

Combined with the **a priori** considerations raised at the beginning of the present Section, the empirical findings
concerning how each of the 18 equations tabulated in Tables I to III track the period May to December 1979 (overpredicting and underpredicting precisely as expected) must be regarded as strong evidence to the effect that the Two Percent Levy, in contravention of EEC regulations, distorted CAP markets in the beef and veal sector. It is felt that any further evidence is really unnecessary, given the nature of the considerations and findings reported above. Thus the considerations which immediately follow are merely supplementary.

Slaughterings of adult cattle usually increase in the month of May (as compared to the preceding April) and usually decrease in January of the following year (as compared to the preceding December). The only year in our 93 month sample period (January 1974 to September 1981) in which the opposite occurred - slaughterings fell in May and increased in the following January - was 1979. This exceptional behaviour can be attributed to the effects of the Levy.

It was argued earlier that the Levy deflected source of supply of live cattle for slaughter in RI, away from RI herds in favour of imported cattle from NI. Such deflection is apparent from the following tabulation of imports of adult cattle as a percentage of RI slaughterings of adult cattle, in the May to December period of 1979, as compared to the
same months in the adjacent years 1978 and 1979:

<table>
<thead>
<tr>
<th>Year</th>
<th>1978</th>
<th>1979</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>6.2</td>
<td>11.5</td>
<td>2.6</td>
</tr>
<tr>
<td>June</td>
<td>4.4</td>
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<td>1.5</td>
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<tr>
<td>July</td>
<td>4.8</td>
<td>9.8</td>
<td>1.5</td>
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<tr>
<td>August</td>
<td>5.8</td>
<td>10.5</td>
<td>1.2</td>
</tr>
<tr>
<td>September</td>
<td>7.8</td>
<td>14.7</td>
<td>2.7</td>
</tr>
<tr>
<td>October</td>
<td>8.9</td>
<td>13.1</td>
<td>5.8</td>
</tr>
<tr>
<td>November</td>
<td>9.6</td>
<td>5.3</td>
<td>6.5</td>
</tr>
<tr>
<td>December</td>
<td>5.5</td>
<td>3.3</td>
<td>7.3</td>
</tr>
</tbody>
</table>

**Source:** Central Statistics Office.

In Table IV the unusually high monthly figures for imports as a percentage of slaughterings in 1979 again validates *a priori* reasoning on the effect of the Levy in distorting source of supply in favour of imported fat cattle, which were exempt from the Levy if slaughtered within two weeks from date of import. The tapering off of the imports/slaughterings percentage in November and December of 1979 is attributed to the knowledge that the Levy would no longer apply as from 1st January 1980.

It was earlier argued that the Levy must have deflected RI cattle exports, away from the GB and continental EEC markets and into NI. However it was also indicated that the realisation of increased profits in exporting to NI would have been contingent on smuggling; thus the share of NI in recorded RI
### Table V

<table>
<thead>
<tr>
<th>Month</th>
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<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
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</thead>
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<tr>
<td>1978</td>
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</tbody>
</table>

Average Percentage, May - December 1979 (8 months) = 85.
Average Percentage, Rest of Sample (19 months) = 114.

### Table VI

<table>
<thead>
<tr>
<th>Month</th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
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<tr>
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<td>63</td>
<td>58</td>
<td>56</td>
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<td>11</td>
<td>13</td>
<td>13</td>
<td>16</td>
<td>21</td>
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<tr>
<td>1980</td>
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</tbody>
</table>

Average Percentage, May - December 1979 (8 months) = 21.5.
Average Percentage, Rest of Sample (19 months) = 39.


**Notes:** No MCA was enforced on trade in live cattle between RI and NI in the period tabulated above. Exports for months prior to January 1978 have not been tabulated because the trade statistics do not enable us to do so for GB. Exports for months after March 1980 have not been tabulated because an MCA was in force on the live cattle trade with NI as from April 1981.
exports to EEC countries would fall (though the share of NI in actual RI exports would increase). That reasoning is validated by the statistical data in Tables V and VI.

VI. SEQUEL

Although the High Court case was in October 1982, the Two Percent Levy had in fact been referred to the Court of Justice of the European Communities in November 1979. In its judgment (Court of Justice, 1981 - 3) on 10th March 1981, the Court stated that it would be necessary to consider trends which became apparent on the Irish market during the period when the Levy was in force, and whether such trends were attributable, at least in part, to the effects of the Levy. However the European Court pointed out that it was for the Irish courts to decide whether the Levy which it had been called upon to consider had, in fact, effects which obstructed the working of machinery established by the Treaty of Rome and the CAP; hence the hearing at the Irish High Court.

The plaintiffs in the High Court case accepted the a priori and empirical considerations reported in Sections III to V above and argued as follows:

Paragraph 15 of the Decision of the Court of Justice (p. 750) had stated that "the real problem posed by the duty in question in relation to those (EEC CAP) rules is ... whether ... it has
produced ... effects capable of obstructing the machinery established by the organization in question" (i.e. CAP institutions). In that context, the evidence was that:

(a) Like the green currency system in recent years, the Levy generated smuggling ex RI into NI.

(b) It deflected source of supply of cattle to the RI meat factories away from RI suppliers in favour of NI producers.

(c) It deflected destination of RI cattle exports away from GB and other EEC countries in favour of NI (because of the opportunities for smuggling to the latter, but not to the former).

In regard to paragraph 20 of the Court's Decision ("if the duty encourages producers to replace some of the goods subject to the duty by production of other goods not subject thereto, the duty is liable to create distortion of markets" - Court of Justice, p. 752) the Two Percent Levy inevitably led to substitution of cattle imports from NI (not subject to the duty if slaughtered within 14 days) for RI cattle (which were subject to the duty) as raw material for RI meat factories, and hence led to distortion of markets.

In regard to paragraph 3 of the Court's Rulings (Court of Justice, p. 754) the Levy was incompatible with the Treaty of Rome and CAP rules because, by inevitably causing RI cattle imports from NI to increase, and by inevitably diverting actual
(rather than just recorded) RI cattle exports away from third markets and into NI, it interfered with the operation of CAP policy instruments (which were meant to be neutral as between different markets within the EEC).

Finally, in regard to Paragraph 5 of the Court's Ruling, it was not the case that the Levy was "applied, systematically and in accordance with the same criteria, to bovine animals which are not being exported, at the time of delivery for slaughter" (Court of Justice, p. 755). Like an MCA tax on RI exports to NI, the Levy deflected exports away from the domestic, the GB and other markets, into NI. That was the case because, as the EEC Commission recognised (see the earlier-cited reference to the Commission), it was impossible to enforce levies in the Irish cross-border cattle trade.

The plaintiffs won their case. However, in spite of the a priori considerations and empirical evidence outlined in this paper, Justice Barrington, in his High Court judgment, stated that he was not convinced that the Levy did in fact induce smuggling from RI into NI. He added that "even if it did, I do not think that that would be a basis on which the legality of the levy could be attacked in this Court. An economist ... may properly be concerned with the wisdom of legislation and with whether it does or does not provide opportunities for abuse but this Court is concerned
with its legality or validity and cannot condemn legislation, otherwise valid, because people have fraudulently abused it."\(^9\)

As noted in Section I above, it was intended that the incidence of the Levy would be on farmers. The defendants in the High Court adhered to the view that the Levy was not intended to be, and was not in fact, a charge on exports or a charge on slaughterers but a charge to be borne by cattle producers. However, apart from the evidence outlined in Sections III to V above, the plaintiffs also contended that there was no way in which slaughterers or exporters (who were administratively chargeable for payment of the Levy) could pass the tax backwards to farmers; thus they submitted that "because of conditions in the Irish livestock market, the machinery for recoupment provided for exporters and butchers is in fact totally inadequate and unworkable."\(^10\)

Justice Barrington concurred with the latter allegation and judged that "I think it unreasonable to make exporters and butchers accounting parties for payment of the duty while allowing them no adequate means of recouping the duty .... It appears to me that exporters ... can not shift the duty to the producer and that, whatever may have been the intention, the duty in fact falls more heavily on live cattle


\(^10\)Ibid., p. 33.
bought for export than on other cattle. The duty therefore appears to me to operate as a duty on exports contrary to the provisions of the Treaty of Rome."\textsuperscript{11}

\textsuperscript{11}Ibid., p. 54.

\textbf{REFERENCES}

Barrington, Mr. Justice, Irish High Court Record No. 3852P of 1979: Martin Doyle and Others versus Government of Ireland, \textit{Judgment}, 26 April 1983.


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