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European Monitoring Centre
for Drugs and Drug Addiction

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TOWARDS A BETTER UNDERSTANDING OF DRUG-RELATED PUBLIC EXPENDITURE IN EUROPE

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Introductory note and acknowledgements

In December 2004, the European Council endorsed the EU drugs strategy for the period 2005–12. This set the framework, objectives and priorities for two consecutive four-year action plans. In February 2005, the Commission presented the first of these action plans for 2005–08 to the Council. It clearly focused on obtaining concrete results in priority areas defined in the strategy. The plan was endorsed by the Council in June 2005.

Under the transversal theme of information, research and evaluation, the plan set the objective of producing estimates on public expenditure on drug-related issues. This involved Member States and the Commission collaborating to develop compatible methodologies on direct and indirect expenditure for drug-related measures, with the support of the EMCDDA.

This Selected issue is one of the results of this collaborative process.

The EMCDDA would like to thank the following for their help in producing this 2008 Selected issue:

- the heads of the Reitox national focal points and their staff;
- the services within each Member State that collected the data;
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Three in-depth reviews of topical interest are published as 'Selected issues' each year. These Selected issues are based on information provided to the EMCDDA by the EU Member States and candidate countries and Norway (participating in the work of the EMCDDA since 2001) as part of the national reporting process.

All Selected issues (in English) and summaries (in 23 languages) are available on the EMCDDA website: http://www.emcdda.europa.eu/publications/selected-issues.

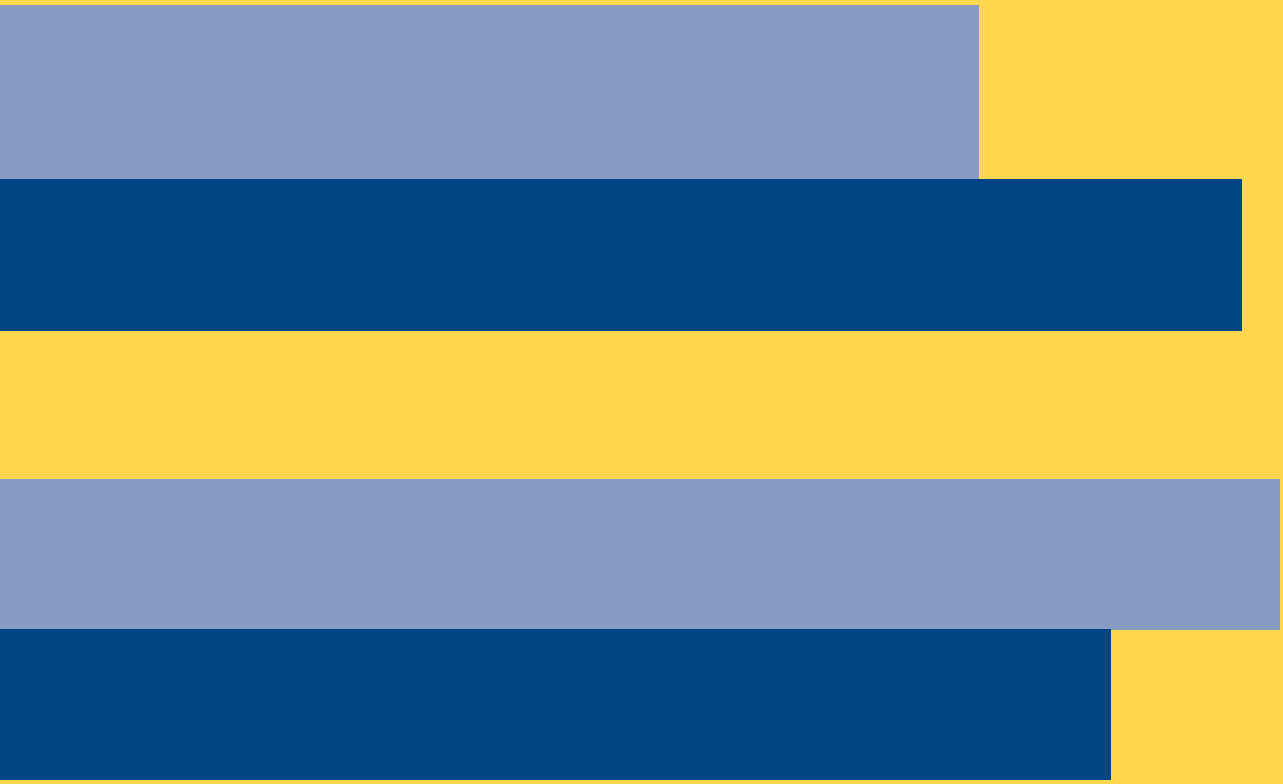
Introduction

Economics is the study of how society uses its limited resources. In today's world where many priorities coexist, restricted resources often mean complex choices. When dealing with policy in relation to the drugs field, decision-makers have a vested interest in improving the effectiveness of drug-related strategies and action plans while lowering costs. With all forms of public spending under intense scrutiny, it is more important than ever to ensure that the public funds available for tackling drugs are serving society's priorities efficiently.

Applied economics plays an important role in providing that justification. When a given set of drug policy objectives could be achieved in more cost-effective ways, formal economic evaluation can identify alternatives, analyse their quality, consequences and costs and finally assess how they contribute to informing the decision-making process.

A quantification of drug-related public expenditure corresponds to the identification of costs that should be included in subsequent economic evaluations from a public administration perspective.

This Selected issue is divided into two sections. Section one briefly reviews some issues on economic evaluation theory that are key to understanding the role of public expenditure as a straightforward costing exercise. The second section, in response to the European drugs action plan 2005–08, proposes a common European classification system of public expenditure that maximises the validity and comparability of results across countries and presents the first estimates of public expenditure in Europe.



Drug-related economic evaluation: key issues

Efficiency

When setting priorities for decision-making in relation to drug policy, a major criterion is achieving greater efficiency, as considerations of efficiency are increasingly part of the broad political debate on drug policy (Carnevale Associates, 2008). Efficiency measures whether the available resources are used to obtain the best value for money, considering the relationship between resource inputs (the costs of labour, capital and/or equipment) and either intermediate (e.g. number of problematic drug users treated) or final outputs (e.g. lives saved, life years gained, percentage reduction in crimes committed). To adopt the criterion of economic efficiency in terms of drug policy implies that choices are taken which maximise the outputs gained from the resources allocated to tackling drugs. Inefficiency exists when resources could be allocated in a way that would increase the outputs produced.

Addressing efficiency through economic evaluation

An economic evaluation has two main features: it deals with both inputs (costs) and outputs (benefits) and also concerns itself with choices: economic evaluation always involves a comparative analysis of alternative courses of action. Therefore, any economic evaluation should identify, measure, value and compare the costs and outcomes of the alternatives being considered. Achieving efficiency requires giving priority to those interventions providing the greatest output per unit cost.

Perspectives in economic evaluation

The perspective of an economic evaluation performed either in a society or organisation affects both the range of costs and benefits that will be included in the evaluation itself.

In general it is argued that, for policy purposes, study comparability is enhanced by adopting a society-based perspective. However, in practice, it may not always be possible for all of the relevant costs and benefits to be included in an economic evaluation. At the very least, economic evaluations should be explicit about the perspectives they adopt, and explain and discuss their likely influence on the final results.

Cost studies

It is important to obtain estimates of the costs of problems stemming from drug use and responses; in order to make informed decisions when allocating scarce resources, policymakers must have a sound understanding of the relative costs of drug-related interventions. Other things being equal, the lower the cost, the more cost-effective a programme or intervention will be, or the higher the net economic benefits it will generate. The costs included in a given study are mainly defined by the study's perspective, the availability of information, and the relative magnitude of the cost components.

A particular perspective on costing: public expenditure

The term 'public expenditure' refers to the value of goods and services purchased/utilised by the general government of a state (at central, regional or local level) in order to perform each of its functions (i.e. healthcare, justice, public order, education, social services) ([1]). Its quantification is a costing exercise undertaken from the government's perspective.

Public expenditure studies also represent important intermediate stages in economic evaluation since they provide an understanding of the size and composition of the cost of public programmes and interventions devoted to tackling drugs.

([1]) Total public expenditure (or total general government expenditure) is expressed in national currency (in millions) in national accounts and includes government expenditure — for example at local, regional and central levels of government, as well as social security funding — under different headings (such as welfare, health, education, etc.). National accounts are compiled in accordance with the European System of Accounts (ESA 1995) adopted in the form of a Council Regulation dated 25 June 1996 ((EC) No 2223/96) and published in the Official Journal L 310 of 30 November 1996. A consolidated version is available at the following address: http://circa.europa.eu/irc/dsis/nfaccount/info/data/esa95/esa95-new.htm

The long-term goal of any government is to deliver appropriate public services to ensure that taxpayers receive value for money. An effective framework for planning, control and reporting of public spending is a crucial prerequisite for achieving this goal. The analysis of a state's public expenditure provides useful information on its government's ability to spend money effectively and efficiently. To prepare an estimate of drug-related public expenditure from a government's perspective is a different exercise from estimating the social costs of drugs — the social perspective. Public expenditure only represents a portion of social costs, mainly in the form of direct costs (those for which payments are made, typically on the basis of using resources in different sectors). Indirect costs (involving a loss in resources: e.g. lost productivity costs due to drug-related morbidity and mortality) are explicitly excluded, as are costs inherent to private stakeholders (e.g. private health-insurance companies).

For drug policy purposes, an analysis of drug-related public expenditure might be of more relevance than estimating social costs, for an analysis of a government's budget allocated to the drugs issue is a clear indicator of what policies a government is using to reduce drug use and related problems, acting as a first step to deciding whether the level and composition of those policies is adequate (Reuter, 2006).

Nevertheless, in a recent report for the EMCDDA, Brice De Ruyver et al. (2007) concluded that in drug-related literature there is no common definition for the terms 'public expenditure' and 'social cost':

> *On the basis of the review of public expenditure studies and social cost studies it becomes clear that there is no common understanding of the meaning of 'public expenditure' and 'social cost'. In fact, several concepts are used. Sometimes very different concepts are used interchangeably. Sometimes the same concept is used, yet with a meaning that differs from one study to another.* (Brice De Ruyver et al., 2007)

The present report therefore aims to provide a clearer definition of what public expenditure means in the field of illegal drugs.

Drug-related public expenditure in Europe

An appropriate drug policy relies on the assessment of drug-related public expenditure on efficiency grounds. This is not feasible without giving a preliminary clear and well-defined classification system where costs are properly identified.

Quantifying a government's drug-related expenditure is a first step in formulating an economic evaluation of drug policy interventions. This will provide information that can be used to determine whether or not intended benefits are being achieved. Once developed, a standardised classification system for this exercise will provide a useful framework for both policy decision-making and public administration accountability.

As part of the EMCDDA's input to the EU drugs action plan 2005–08, this section aims to quantify current public expenditure in the field of drugs in the EU with a unified and common classification approach that maximises the validity and comparability of results across countries.

Since government expenditure reflects collective choices stemming from political processes and this varies from one country to another, international comparisons of public expenditure can only provide limited results. Many policy initiatives are unlikely to be easily transferable across countries in light of the different political, social and economic contexts that exist. However, some evaluation of the economic consequences of the way these choices interact with institutional arrangements and other economic and social environmental aspects should be possible. Moreover, drug-related expenditure by country may offer a useful starting point for international benchmarking on drug policy funding (see also Limitations of the study and future developments).

The EMCDDA classification in relation to drug-related expenditure has two components: 'labelled' and 'non-labelled' expenditure.

Labelled expenditure

Labelled drug-related expenditure is the *ex-ante* planned expenditure that reflects the voluntary commitment of the state in the field of drugs. Labelled expenditure can be traced back by a detailed review of budget and/or fiscal year-end accountancy reports for an implemented/executed budget. The budget is one of the most important policy documents produced by governments, for it represents the concrete implementation of political objectives.

Ideally, all public expenditure on drug-related matters should feature as labelled expenditure in government budgetary documents with budget documentation covering all implemented drug-related activities. In general, the budget is a financial reflection of a government's policy: if the budget does not include labelled expenditure on drug-related issues, there is no guarantee that scarce resources are allocated efficiently and that proper control and public accountability is enforced.

However, in practice this situation is confounded by three important facts: (1) drug-related programmes and activities can be found at many different government levels; (2) drug-related expenditure is frequently embedded in programmes with broader goals; and (3) the reactive nature of some drug-related expenditure.

On the whole, the structure of general government consists of a central government and sub-national governments (i.e. regional and local, according to country) that usually manage independent budgets whose size and nature vary, according to the political configuration of the country concerned. In addition, in some countries, a significant share of government expenditure is managed through special procedures (e.g. revolving funds, external loans, counterpart funds, budgets of autonomous agencies, special accounts managed by some ministries). It is not unusual to see expenditure managed through sub-national governments or by 'special arrangements' that do not feature in the main government budget, but are managed through extra-budgetary funds.

Here again, government budget documents should consolidate all drug-related operations managed by general government, even if each government and public sector entity may have its own drug budget. The health, social and economic components of the drug phenomenon help explain why important amounts of public expenditure are embedded in broader programmes; for example, consequences of drug use and trafficking (police or law court services) cannot be

easily forecasted and are thus not susceptible to having separate budget lines in appropriations. The amount of these forms of embedded expenditure can only be estimated through modelling approaches that will be discussed later under the non-labelled expenditure part of this report.

Methodology

The EMCDDA coordinates a network of national focal points (NFPs), named Reitox, set up in the 27 EU Member States, Norway, and the candidate countries. Commissioned each year by the EMCDDA, the Reitox network produces reports that draw an overall picture of the drug phenomenon at national level in each EU Member State, Norway and the candidate countries. These data provide key information to the EMCDDA and are one of the main resources used for compiling its *Annual report*.

National drug-related expenditure was initially identified by the Reitox NFPs as part of the national reporting exercise for 2007.

Labelled expenditure

Reitox NFPs were asked to list any budgeted labelled drug-related fund (including goods and services) found after reviewing central, regional and local government budgets (or year-end reports) for the fiscal year 2005. When the accounting period concerned a different fiscal year, a rate of 6 % was used by the EMCDDA to adjust for the occurrence of financial costs over time ([1]) ([2]).

Each identified budgeted fund was then classified by the NFP within a COFOG function (1st and 2nd levels) (see box on page 16), and within a drug programme division (Prevention, Treatment, Enforcement, Harm reduction) as defined by Reuter (see box on page 18).

Non-labelled expenditure

Wherever possible, NFPs were encouraged to explore and suggest possible definitions of 'attributable proportions' suitable to estimate non-labelled drug-related expenditure under the following selected COFOG groups (2nd level): Police services; Law courts; Prisons; Medical products, appliances and equipment; Outpatient services; Hospital services; Public health services.

([1]) This is the financial discount rate suggested by the Guide to cost benefit analysis of investment projects (page 104) for 2001–06 prepared for the Evaluation unit, DG Regional Policy, European Commission (available at: http://ec.europa.eu/regional_policy/sources/docgener/guides/cost/guide02_en.pdf).

([2]) The Czech Republic, Germany, Estonia, Lithuania and Romania reported on 2006. Belgium and the Netherlands reported on 2004 and 2003, respectively. The United Kingdom data is for the UK financial year ending 31 March 2006.

Total labelled expenditure

Table 1 provides a snapshot of overall budget allocations to drug-related issues in Europe. 21 out of 30 countries (27 EU Member States, two candidate countries and Norway) reported on detailed drug-related labelled expenditure for 2005 (see box for methodological details), and nine of them gave no information. The table shows the total drug labelled amounts ([2]) reported by country for 2005 as a percentage of total general government expenditure in decreasing order.

Overall, the amount of expenditure reported totalled EUR 2.42 billion ([3]). Three countries (the United Kingdom, France and Ireland) accounted for the majority (81 %) of these expenses in absolute terms. In relative terms, 57 % of the countries reported labelled expenditure equal to or above 0.05 % of total public expenditure. Ireland was the country with the highest proportion of expenditure of this nature (0.32 %), followed by Malta (0.23 %) and the United Kingdom (0.18 %).

These results suggest that labelled items amount to only a marginal percentage of actual total drug-related expenditure. As stated by a preliminary study on public drug-related expenditure in Luxembourg (Origer, 2002), there can be several reasons for this: budget lines may be too generic to be properly identified as labelled drug expenditure, or too aggregated, over-inclusive, or simply unidentifiable as such. For example, in Slovakia various budgetary and financial documents were studied for the present exercise (e.g. financial statements submitted to the government, budgets and year-end reports of central state administrative bodies, annual reports of various institutions working in the field of drugs). Although documents at central level give values for financial movements in the budgetary year, expenditure is usually reported in total, with no detail as to whether this was drug-related. Consultation with experts and the Ministry of Finance confirmed that such information was not available. Similarly, it may also be necessary to distinguish between labelled expenditure that is *published* and that which is *not published*. In Ireland, the present exercise showed that details of only around 18 % of labelled expenditure are published. The remaining 82 % is either subsumed under, but clearly identifiable in, some larger published budget, or it is a clearly defined drug-related programme or activity that receives funding from a range of different labelled budgets. Many departments and agencies involved in drug-related matters

([2]) The costs identified in this report are all financial or accounting costs. Financial costs (expenditure) are the actual amounts spent on resources and are important in programme planning and budgeting as revenues must be generated to cover these financial outlays in order to sustain programmes. Nevertheless, the financial costs of resources may not reflect their real value for society. Financial costs do not aim to measure opportunity costs, or the benefits foregone by a particular use of resources. In theory, resources used in economic evaluations should be valued at opportunity costs. This is a complex task, therefore financial costs tend to be used instead (Palmer and Raftery, 1999).

([3]) It is important to highlight that discrepancies reported between financial data collected early in the budget cycle and later reports on actual outturns, indicate that financial reports are a more accurate indicator of the actual level of labelled public expenditure than budgetary sources.

do not currently have adequate reporting systems in place to capture and report this budgetary complexity. However, the data is potentially available, particularly in relation to direct expenditure by government bodies.

Table 1: Total labelled expenditure reported by country

	Amount (EUR million)	Amount as a proportion of total public expenditure (%) ([1])
Ireland	176.8	0.32
Malta	4.9	0.23
United Kingdom	1 463.8	0.18
Denmark	119.1	0.11
Poland	107.0	0.10
Portugal	69.1	0,10
Luxembourg	9.8	0.08
Greece	53.4	0.06
Slovenia	7.5	0.06
Estonia	1.9	0.05
Cyprus	3.2	0.05
Lithuania	3.5	0.05
Romania	13.5	0.04
Czech Republic	16.9	0.04
France	315.4	0.03
Slovakia	1.9	0.01
Finland	8.0	0.01
Germany	35.5 ([2])	0.003
Austria	4.0 ([3])	0.003
Hungary	1.0	0.002
Croatia	7.2	n.a.

([1]) Total general government expenditure in 2005. *Source:* Eurostat
Source of data other than ([1]): Reitox national reports, 2007.

([2]) The source for this information was the national report provided by Germany. This amount of money only covers expenditure within the Federal Ministry of Health covering expenses of the Federal Drug Commissioner. Expenditure for treatment, law enforcement and prevention is not included.

([3]) Most of the expenditure in Austria is in regional and local budgets and was therefore not collected as part of this exercise.

A full and comprehensive study containing information from regional and local agencies would nevertheless be beyond the present resources of most NFPs. For example, according to the United Kingdom NFP, much of the expenditure data in the United Kingdom is aggregated at programme level and, without a detailed analysis of local expenditure documents, is difficult to classify using broad headings.

In addition, drug services usually do not stand in isolation and form part of many publicly-funded programmes including education and crime reduction and other services that provide support to problem drug users. For instance, in England, the 2003/04 Budget allocated EUR 28.9 million additional funding in recognition of the need to provide extra support to jobseekers who are problem drug users. While this activity continues, there is no requirement to report how much of this expenditure is directed exclusively towards meeting the needs of problem drug users and therefore the United Kingdom NFP was unable to include such figures in the analysis of labelled expenditure.

In some countries, the vast majority of information on public expenditure is limited to a secondary analysis of available data. The German health system, for example, is highly fragmented and the data regarding drug-related issues is distributed across a large number of institutions and data-carriers and is in part subject to stringent data-protection laws. This fragmentation is furthermore associated with limitations regarding the comparability and interpretation of results. Over and above these problems related to the fragmented health system, also the strong federal structure (as in other countries) with the basic principle of subsidiarity causes difficulties in calculating an overall picture from a central perspective. As responsibility for health issues lies within the responsibility of the 16 regions ('Länder'), different systems of accounting and budgeting and even different setting of priorities will make the attempt to calculate national figures very ambitious. Beside federal and regional level, the partners of the German social insurance funds also play an important role, especially within the treatment area. To account for all these major sources of information requires considerable means and time not available for the preparation of this study. An additional limitation in Germany is that the information published by public institutions involved in drug issues usually does not distinguish between licit and illicit substances, providing overall estimates of, for example, all psychological and behavioural disorders caused by psychotropic substances (F10 – F19 ICD10 diagnosis) ([4]).

To be able to record such varied types of data would require shifts in general government accounting practices, for example moving towards an output focus when preparing the government's annual estimates and disclosing details of expenditure currently classified with highly generic labels. Hopefully, budgeting and reporting arrangements on drug-related matters in the public sector will become more apparent in the coming years as all government financial

([4]) International Classification of Diseases, 10th Revision (ICD-10), 2007 version. World Health Organization, Geneva. http://www.who.int/classifications/apps/icd/icd10online/

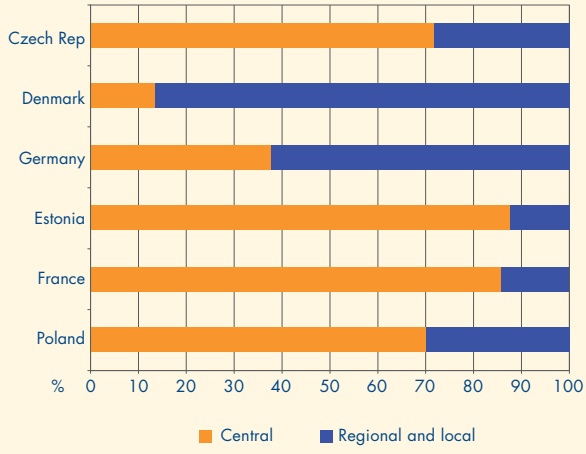
issues gain in accessibility. In Ireland, for example, it is anticipated that a Management Information Framework will be introduced; one of its main roles will be to improve the management of resources once allocated, and to provide for increased clarity and accountability in the use of these resources. Annual output statements are to be published by government departments, and will match key outputs and strategic impacts to financial and staffing resources.

Nevertheless, as stated by the Luxembourg NFP, drug-related public expenditure identification is feasible, although this requires a considerable amount of analytical work, including the analysis of budget and year-end report documents, clarification meetings with financial authorities, qualitative interviews, analysis of activity reports, financial statements of ministerial departments and other public bodies' statistical registers, to name but a few. In addition, researchers may need to decide themselves on whether to include certain types of expenditure. It is therefore important that such decisions are taken according to standards that can be replicated, using harmonised and broadly recognised methodological benchmarks, guidelines and classification systems.

Regional and local labelled expenditure

Most of the countries reported labelled expenditure at central government level. Only six (Czech Republic, Denmark, Germany, Estonia, France, Poland) accounted expenses at regional and/or local government level (Figure 1). These regional and local expenses represent a very small proportion — 9 % — of the total labelled expenditure identified. The Czech Republic was the only country to provide details on both regional and local budgets (representing 19 % and 10 % of the total budget respectively), with the information coming mainly from the annual reports of drug policy implementation in regions, which were prepared by regional drug coordinators and submitted to the Secretariat of the Council of the Government for Drug Policy Coordination.

Figure 1: Labelled drug expenditure (in percentages) by level of government



Source: Reitox national reports, 2007.

As already expressed, at the time of drafting this report, most NFPs could not carry out a full and comprehensive analysis of all levels of government expenditure, hence efforts focused on assessing labelled expenditure from central government. This explains the lack of detail on local and regional government expenditure which does not reflect the role really played by regions and local communities in providing public services related to drugs. For instance, in Germany, the total labelled expenditure identified at Länder level tends to be higher than at federal level.

In Ireland, there is no regionally or locally-funded drug-related public expenditure. Instead, funds are voted via the national parliamentary 'Estimates' process for allocation by government departments or agencies for use at regional and local levels. Coding this funding according to level of government rather than according to the function of the voluntary or community-based recipient of the funding may lead to an under-representation of activities carried out at regional or local level. For example, while a large portion of public money may be voted for central government support for community development, this same money may then be disbursed for expenditure to a range of regional or local programmes or projects, which may be coded to a specific health-related or education-related activity. As this type of expenditure represents a significant portion of drug-related public expenditure in Ireland, the issue needs to be addressed. One solution might be to record the expenditure according to both government and non-government activities, but the risk of double-counting would need to be managed.

In Finland, the state participates in financing municipal expenditure through the transfer of revenues. Consequently, municipalities as producers of healthcare services are not the sole payers of the service. Municipalities bear around 75 % of public sector health service costs. The remainder is paid by the state administration. In some instances, it is impossible to make a precise breakdown with regard to the end payer. For instance, when making cost calculations, it is difficult to classify projects co-funded by several actors. Finland identified EUR 73 million (41 % of total identified expenditure) as being allocated to costs resulting from drug use incurred by municipalities. Here also, it is vital to make sure expenditure is not counted more than once.

In the United Kingdom, responsibility for the drug strategy lies with a number of departments with the Home Office providing the overall lead. Devolution of powers to administrations in Northern Ireland, Scotland and Wales means it is increasingly difficult to produce a United Kingdom national estimate of drug-related expenditure. This is compounded by devolution of spending to local level across the United Kingdom. In any case, the UK did report budgets which were spent locally in accordance with local priorities, although they were allocated from national funds.

Last but not least, Belgium reported aggregated figures at various government levels: Federal government accounted for 73 % of the total expenditure reported, with the remaining 27 % coming from outlays by towns and municipalities (21 %) and regions (6 %).

The COFOG classification system

The main challenge of comparing budget expenditure for international benchmarking across countries at a given time is consistency. Consistency is also important when making comparisons of expenditure within a country over time.

For the present exercise, we therefore proposed using a consistent categorisation system based on the international Classification of the Functions of Government (COFOG). COFOG is a detailed classification of the functions, or socioeconomic objectives, that general government units aim to achieve through a range of outlays. Experience has shown this system to be relevant and amenable to a wide variety of analytic applications. The COFOG classification has three structure levels (See box on page 16): at the first level, government expenditure is broken down into 10 *functions*. These are each divided into 69 *groups* (second level of COFOG), which are themselves divided into classes, the most detailed classification level. COFOG permits an examination over time of trends in government outlays on particular functions. Conventional government accounts are not usually suitable for this purpose because they reflect the organisational structures of governments. Not only might time series' be distorted by organisational changes, but at a specific time some organisations may be responsible for more than one function, and the responsibility for one function might be divided among several organisations. COFOG is also used for making international comparisons of the extent to which governments are involved in economic and social functions. Just as COFOG avoids the problems of organisational changes in a single government, so too does it avoid the problems of organisational differences among countries.

In an area like drug-related public expenditure where there is agreed functional classification, adopting COFOG instead of customising a brand new classification presents some advantages. COFOG is an international standard implemented by the European System of National and Regional Accounts (ESA 95) (European Commission, 2002) and the definition of its categories is clearly established and easily accessible (United Nations, 2008).

Overall labelled expenditure by COFOG function

Ten countries (Czech Republic, Ireland, France, Luxembourg, Hungary, Poland, Portugal, Slovakia, Finland, United Kingdom) yield labelled expenditure classified according to COFOG functions (Table 2). It should be noted here that COFOG is not fully implemented in some countries (i.e. Czech Republic), thus data provided had to be re-classified by NFPs. As expenditure is often programme or funding stream based, it can be categorised under a number of COFOG headings. Three countries explicitly reported difficulties in making the COFOG classification, for example the United Kingdom had problems classifying EUR 91 million (6 %) of the total expenditure provided.

Overall, of the total labelled expenditure categorised by the 10 reporting countries, 95 % came within the government functions of health (67 %), public order and safety (22 %) and general public services (5 %).

By country, health expenditure captured the highest proportion of labelled disbursement in all of the 10 reporting states, except Slovakia (7 %). Finland (100 %), Portugal (93 %), Hungary (90 %) and France (87 %) were those with the highest proportions under this function. Labelled health expenditure in the remaining countries (Czech Republic, Ireland, Luxembourg, Poland, United Kingdom) ranged from 49 % to 66 %. The Czech Republic, Luxembourg and Poland showed the highest proportions of outlays on public order and safety (ranging from 34 % to 37 %), followed by the United Kingdom (24 %) and Ireland (16 %). No labelled expenses were identified in this function by France, Hungary, Slovakia and Finland.

The general public services function covered 12 %, 6 % and 4 % of labelled expenditure in France, Ireland and the United Kingdom respectively. The majority (93 %) of labelled expenses from Slovakia fell under the general public services function, however this same function only accounted for a meagre 0.7 % in Luxembourg, and nothing in the other countries (Czech Republic, Hungary, Poland, Portugal, Finland).

Ireland was the only country providing labelled expenditure within the functions of housing and community amenities (21 %), and economic affairs (7 %). Social protection only captured labelled expenditure in Hungary (10 %) and the United Kingdom (0.9 %). Defence labelled expenditure was

Classification of the Functions of Government (COFOG) by functions (1st level) and groups (2nd level)

gf01 General public services
gf0101 Executive and legislative organs, financial and fiscal affairs, external affairs
gf0102 Foreign economic aid
gf0103 General services
gf0104 Basic research
gf0105 R&D General public services
gf0106 General public services n.e.c.
gf0107 Public debt transactions
gf0108 Transfers of a general character between different levels of government

gf02 Defence
gf0201 Military defence
gf0202 Civil defence
gf0203 Foreign military aid
gf0204 R&D Defence
gf0205 Defence n.e.c.

gf03 Public order and safety
gf0301 Police services
gf0302 Fire-protection services
gf0303 Law courts
gf0304 Prisons
gf0305 R&D Public order and safety
gf0306 Public order and safety n.e.c.

gf04 Economic affairs
gf0401 General economic, commercial and labour affairs
gf0402 Agriculture, forestry, fishing and hunting
gf0403 Fuel and energy
gf0404 Mining, manufacturing and construction
gf0405 Transport
gf0406 Communication
gf0407 Other industries
gf0408 R&D Economic affairs
gf0409 Economic affairs n.e.c.

gf05 Environment protection
gf0501 Waste management
gf0502 Waste water management
gf0503 Pollution abatement
gf0504 Protection of biodiversity and landscape
gf0505 R&D Environmental protection
gf0506 Environmental protection n.e.c.

gf06 Housing and community amenities
gf0601 Housing development
gf0602 Community development
gf0603 Water supply
gf0604 Street lighting
gf0605 R&D Housing and community amenities
gf0606 Housing and community amenities n.e.c.

gf07 Health
gf0701 Medical products, appliances and equipment
gf0702 Outpatient services
gf0703 Hospital services
gf0704 Public health services
gf0705 R&D Health
gf0706 Health n.e.c.

gf08 Recreation, culture and religion
gf0801 Recreational and sporting services
gf0802 Cultural services
gf0803 Broadcasting and publishing services
gf0804 Religious and other community services
gf0805 R&D Recreation, culture and religion
gf0806 Recreation, culture and religion n.e.c.

gf09 Education
gf0901 Pre-primary and primary education
gf0902 Secondary education
gf0903 Post-secondary non-tertiary education
gf0904 Tertiary education
gf0905 Education not definable by level
gf0906 Subsidiary services to education
gf0907 R&D Education
gf0908 Education n.e.c.

gf10 Social protection
gf1001 Sickness and disability
gf1002 Old age
gf1003 Survivors
gf1004 Family and children
gf1005 Unemployment
gf1006 Housing
gf1007 Social exclusion n.e.c.
gf1008 R&D Social protection
gf1009 Social protection n.e.c.

Source: Eurostat.
n.e.c. — not elsewhere classified

identified only in France (0.3 %) and Portugal (0.1 %), and education expenses only in the United Kingdom (1.3 %).

Labelled expenditure for public order and safety

Six countries (Czech Republic, Ireland, Luxembourg, Poland, Portugal, United Kingdom) reported labelled expenditure for the public order and safety COFOG function (Table 3), adding up to a total amount of EUR 480 million. Of this total, 31 % corresponded to prisons, 16 % to police services and 0.06 % to law courts. More than half (54 %) was spent in the administration, operation or support activities relating to public order and safety affairs and services. By country, 100 % of expenditure in Luxembourg came under this last category, and the majority of expenditure identified in the

Table 2: Labelled expenditure reported by COFOG, 1st level (EUR million)

	General public services	Defence	Public order and safety	Economic affairs	Housing and community amenities	Health	Education	Social protection
Czech Republic	–	–	5.8	–	–	11.1	–	–
Ireland	11.3	–	29.0	13.5	37.2	85.8	–	–
France	39.3	1.0	–	–	–	275.1	–	–
Luxembourg	0.1	–	3.9	–	–	5.9	–	–
Hungary	–	–	–	–	–	0.9	–	0.1
Poland	–	–	40.0	–	–	67.0	–	–
Portugal	–	0.1	4.4	–	–	64.6	–	–
Slovakia	1.8	–	–	–	–	0.1	–	–
Finland	–	–	–	–	–	8.0	–	–
United Kingdom	64.9	–	352.0	–	–	923.3	19.2	13.2

Source: Reitox national reports, 2007.

United Kingdom (64 %). Prison-related expenditure was provided by the United Kingdom (35 %), the Czech Republic (25 %) and Ireland (17 %). Police services accounted for 100 % of the total amount reported in Poland and Portugal and 82 % and 75 % in Ireland and the Czech Republic respectively. The United Kingdom identified 0.7 % of its labelled public order and safety expenditure in this category (i.e. most was included in non-labelled expenditure). Regarding law courts, Ireland was the only country reporting a tiny portion (1 %) in this category.

Labelled expenditure for health

Labelled expenditure for the health COFOG function was reported by 10 countries (Czech Republic, Ireland, France, Luxembourg, Hungary, Poland, Portugal, Slovakia, Finland, United Kingdom) (Table 4). The total amount reported was EUR 1.38 billion, the highest proportion being under outpatient (68 %) and hospital services (16 %), followed by medical products (7 %) and public health services (7 %).

Two countries, the United Kingdom and Luxembourg, placed the majority of labelled health expenditure under the outpatient services category (98 % and 89 %, respectively). The other countries, except Portugal (2 %), did not report outlays in this group.

Hospital services accounted for the highest proportion of labelled expenses in Poland (87 %) and France (59 %) and a modest figure in Portugal (2 %). Medical products expenses were only provided in France (32 %), Poland (13 %) and Luxembourg (5 %) and the United Kingdom (0.2 %). All the expenditure on health by Hungary, and a majority in Portugal (96 %) related to public health services.

Finland reported only on R&D expenses and the majority of Slovakia's labelled expenditure for health were disbursements which cannot be assigned to the former categories. It was not feasible for Ireland to break down its expenditure for the COFOG health function for 2005

Table 3: Labelled expenditure reported by COFOG, 2nd level – Public order and safety (EUR million)

	Police services	Law courts	Prisons	Public order and safety not elsewhere classified
Czech Republic	4.3	–	1.4	–
Ireland	23.7	0.3	5.0	–
Luxembourg	–	–	–	3.8
Poland	40.0	–	–	–
Portugal	4.4	–	–	–
United Kingdom	2.8	–	140.0	254.2

Source: Reitox national reports, 2007.

Table 4: Labelled expenditure reported by COFOG, 2nd level – Health (EUR million)

	Medical products	Outpatient services	Hospital services	Public health services	R&D Health	Health not elsewhere classified
Czech Republic	–	11.1	–	–	–	–
Ireland	–	–	–	3.8	–	–
France	87.0	–	162.3	25.8	–	–
Luxembourg	0.3	5.2	–	0.2	0.1	–
Hungary	–	–	–	0.9	–	–
Poland	8.6	–	58.3	–	0.1	–
Portugal	–	1.0	1.4	62.1	–	–
Slovakia	–	–	–	–	–	0.1
Finland	–	–	–	–	8.0	–
United Kingdom	2.0	920.6	–	0.1	0.3	15.5

Source: Reitox national reports, 2007.

below the first level, as the national health services and the accounting system were completely reorganised in that year. The health expenditure in Ireland in 2005 reported at COFOG 2nd level was expenditure by the Department of Education for Science for public health services.

The figure provided by the Czech Republic refers to medical products, outpatient services and hospital services in total. Available data did not detail the split of expenditure between these categories. Similarly, the public health services figure for the United Kingdom only refers to expenditure on syringe exchange services in Northern Ireland.

The Reuter programme classification of labelled expenditure

According to the different needs for policy formulation, reporting and budget management, public expenditure can be classified according to multiple classes other than function (e.g. organisation, fund type, economic category, line-item, programme). A programme is a set of activities that meet the same specific objectives. In contrast to COFOG, a classification by programme takes into account the government's policy objectives and how these policies will be implemented. Function and programme categorisations are suitable for both policy analysis and formulation and performance accountability (Allen and Tomasi, 2001).

Reuter (2006) has recently proposed a drug-specific programme division that considers for its definition the likely effects of the programme itself. Hence, labelled expenditure was classified further by the reporting countries using the Reuter programme division (see box). Eight of them tried using the Reuter classification (Ireland, France, Luxembourg, Hungary, Portugal, Slovakia, Finland, United Kingdom) (Figure 2). Overall, 62 % of their labelled expenditure (EUR 1.27 billion) was classified according to the system's four categories with treatment being the most frequent type of programme financed (77 %), followed by enforcement (12 %), prevention (10 %) and harm reduction (1 %).

Reuter's drug programme division

Prevention programmes: reduce initiation or the probability of progress from experimental to regular drug use, either by persuasion or by reducing the accessibility of drugs for novice users.

Treatment programmes: reduce drug use by experienced users through direct individual service (e.g. medical and counselling services).

Enforcement programmes: programmes aimed at traffickers and producers to shift up the supply curve for drugs; other things being equal, they should raise the price of drugs and lower quantity. Programmes aimed at users and retailers raise the transaction costs of buying drugs; those efforts shift the demand curve downwards and lower prices and quantities.

Harm reduction programmes: seek explicitly to reduce the adverse consequences of drug use. There are two categories: harm prevention aims to reduce the risk of harm conditional on drug; harm amelioration aims to reduce the severity of specific harms after their occurrence (e.g. treatment of HIV positive patients, psychiatric treatment for co-morbidities).

Source: Reuter (2006).

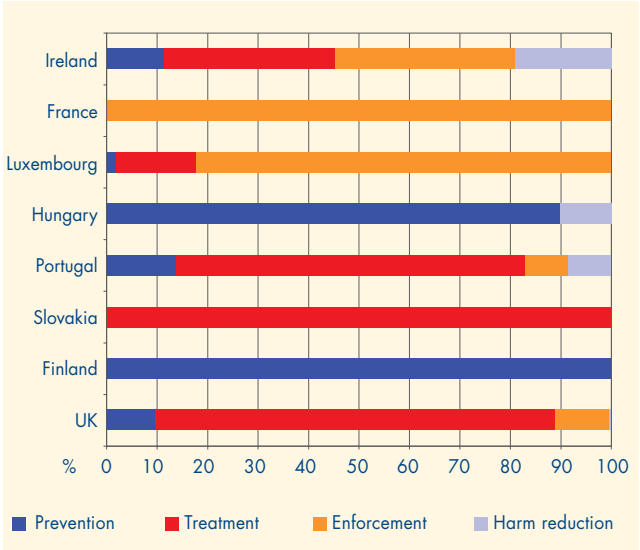
By country, treatment programmes had the highest proportion of labelled expenditure in Slovakia (100 %), the United Kingdom (79 %), Portugal (69 %) and Ireland (34 %). Finland (100 %) and Hungary (90 %) had their main expenses in prevention, and France and Luxembourg in enforcement (100 % and 82 % respectively).

Difficulties in implementing both COFOG and Reuter classifications

Countries experienced some difficulties when classifying budget items according to COFOG or Reuter categorisations. Budget reports often list expenditure items according to the administrative unit in which they occurred, however in many cases countries lacked the information needed to make the classification.

For example, in the United Kingdom, much of the expenditure data is aggregated at programme level and, without a detailed analysis of local expenditure documents, it is difficult to classify using broad headings. The monitoring of United Kingdom drug-related expenditure is often linked to programme expenditure which presents difficulties when trying to disaggregate programme components into COFOG categories. As expenditure is often programme or funding stream based, it can be categorised under a number of headings. An illustration of this is the 2005/06 Partnership Grant for funding substance misuse work for young people in England. This was funded by the Home Office, the Department of Health, the Department for Children, Schools and Families, and the Youth Justice Board, and financed activities such as prevention, education support and advice

Figure 2: Labelled drug expenditure (in percentages) by Reuter's programme classification



Source: Reitox national reports, 2007.

services and treatment. Funds were distributed amongst local partnerships throughout England and could be used by them to finance a number of activities to address local needs. Similarly, in Wales national expenditure is recorded at the level of allocations to Community Safety Partnerships (CSPs). CSPs are responsible for tackling substance misuse and delivering substance misuse local action plans. Spending is determined at local level and the classification of drug-related expenditure is only possible by examining budgetary documents at this level. Similar problems are encountered when examining spending in Northern Ireland. Such detailed analysis requires time and resources and therefore added to the burden of this task for the United Kingdom focal point.

Similar difficulties to the COFOG categorisation were found when using Reuter's taxonomy of drug-related expenditure. For example, local action plan expenditure in England contains elements of treatment, prevention and harm reduction, which are difficult to disaggregate. Furthermore, some types of expenditure, such as research and information, policy and strategy and overseas drug-related assistance cannot be classified under the four programme divisions without a detailed examination of each project. National spending is often grouped by programme or funding stream making it difficult to disaggregate the different elements. As expenditure is based on local needs and priorities, a substantial amount of programme expenditure is delegated to a local level where agencies have discretion over expenditure decisions and monitoring requirements are kept to a minimum wherever possible. This means that collation of a detailed breakdown of labelled spending by COFOG categories or by Reuter's drug programme divisions would only be possible by placing additional burdens on local agencies.

In Ireland, it was much easier to categorise drug-related public expenditure by COFOG functions than by Reuter's programme definition, and it was stated that adopting the framework of effects recommended by Reuter would require (i) an educational effort with planners and budget holders to ensure understanding and acceptance of the nuances of the different categories, and (ii) changes in the design, monitoring and evaluation of interventions.

Non-labelled expenditure

As introduced before, unfortunately not all drug-related expenditure is identified as such in national budgets or year-end reports. To overcome this problem, the solution either involves improving budgetary accountability (unlikely in the short term) or setting up specific approaches to estimate the amount expended in specific activities embedded in other programmes and interventions. In this case, non-labelled

drug-related expenditure can be estimated following a straightforward modelling approach.

Building on the experience of previous examples in the field (Origer, 2002; Kopp and Fenoglio, 2003; Postma, 2004) the methodology proposed is based on a gross (or top-down) costing approach.

Three stages can be distinguished in costing; identification, measurement and valuation. Identification consists of listing the likely resource effects of the intervention as comprehensively as possible to help define the framework of the approach. As a first step in exploring a broader scope of drug-related expenditure, initial efforts focused on the COFOG groups that are most likely to accumulate the majority of public expenditure: police services, law courts, and prisons (under the public order and safety function), and medical products, appliances and equipment, outpatient services, and hospital services (under the health function). Measurement refers to the quantification of the resources used and the final stage refers to the valuation in monetary terms of these resources. Two strategies can be distinguished in measuring and valuation: micro- and gross-costing (Raftery, 2000). Micro-costing refers to a detailed analysis of the changes in resource use due to a particular intervention and, although precise, tends to be a costly exercise and runs the risk of being too specific to particular contexts. Also, whereas a detailed and comprehensive micro-costing would be desirable, its implementation in 30 countries is not practicable. Gross-costing is a top-down approach where a total budget is allocated to identified specific services *ex ante* and is the procedure used here.

In order to proceed with the gross-costing procedure, countries were asked to provide two elements: (i) overall government expenditure by selected 2nd level COFOG groups (see boxes on pages 12 and 16), and (ii) the attributable proportions reflecting the percentage of drug-related activities within each of the selected COFOG groups. As details on 2nd level COFOG groups were not publicly available in many countries, the NFPs involved in providing non-labelled expenditure therefore opted to provide some alternative figures that would reflect overall expenditure in the areas concerned. This involved providing suitable attributable proportions that can be calculated in a number of different ways. This whole exercise involved some degree of creativity and was very time-consuming. The United Kingdom, for instance, used a combined estimation approach where some items were calculated through a gross-costing procedure, while others used micro-costing ([5]). The in-depth estimation performed by the UK means that its figures of non-labelled public expenditure are much higher than those from other countries. This should be taken into consideration when reading the figures presented in tables and figures.

Table 5 shows the results from the estimation exercise on non-labelled expenditure on public order and safety presented by nine countries (Czech Republic, France, Luxembourg,

Table 5: Non-labelled expenditure reported on public order and safety (COFOG 1st and 2nd levels) by country

	Amount (EUR million)				Total as a proportion of COFOG (%) ([1])
	Police	Law courts	Prisons	Total	
Czech Republic	110.5	16.0	36.4	162.9	7
France	571.2	13.1	270.2	854.5	4
Luxembourg	4.4	1.0	13.9	19.3	6
Hungary	16.5	6.9	7.6	31.0	2
Poland	4.4	92.4	22.5	119.3	3
Portugal	n.a.	54.3	n.a.	54.3	2
Finland	20.8	4.7	32.6	58.1	2
United Kingdom	3 321.0	171.0	1 416.6	4 908.6	11
Norway	108.5	47.0	78.7	234.2	9

([1]) Total general government expenditure on public order and safety function (COFOG 1st level) in 2005.
Source: Eurostat. Source of data other than ([1]): Reitox national reports, 2007.

([5]) See the EMCDDA website at: http://www.emcdda.europa.eu/publications/selected-issues/public-expenditure for a presentation of estimation strategies used by selected countries.

Table 6: Non-labelled expenditure reported on Health (COFOG 1st and 2nd levels) by country

	Amount (EUR million)					Total as a proportion of COFOG (%) (1)
	Medical products	Outpatient services	Hospital services	Public health	Total	
Czech Republic	–	0.4	3.1	0.4	3.9	0.06
France	n.a.	349.6	287.1	n.a.	636.7	0.51
Luxembourg	n.a.	2.1	3.5	0.1	5.8	0.36
Austria	n.a.	n.a.	24.1	n.a.	24.1	0.14
Poland	n.a.	2.1	0.8	n.a.	2.8	0.03
United Kingdom	17.8	32.0	129.4	n.a.	179.2	0.14

(1) Total general government expenditure on Health function (COFOG 1st level) in 2005.

Source: Eurostat. Source of data other than (1): Reitox national reports, 2007.

Hungary, Poland, Portugal, Finland, United Kingdom, Norway). Overall, 65 % of the expenses on public order and safety were devoted to police services, 29 % to prisons and 6 % to law courts. Most reporting countries (Czech Republic, France, Hungary, United Kingdom, Norway) fit into this sharing of expenditure among the COFOG groups, but some others showed a highest proportion of expenditure in prisons (Luxembourg, Finland), or in law courts (Poland). These differences can be explained by the different methods of estimation applied by the NFPs when providing this information.

By country, drug-related expenditure on police, law courts and prisons represented between 2 % and 11 % of total general government expenditure on public order and safety.

Table 6 presents the non-labelled expenditure estimated on health. None of the six countries providing information on this function were able to consider all four proposed groups (Medical products, Outpatient, Hospital and Public health services). This can be explained by a possible lack of access to indicators that can act as attributable fractions. The majority of reported expenditure was for hospital (53 %) and outpatient (45 %) services. Only the United Kingdom estimated outlays on medical products, and the Czech Republic and Luxembourg were the only countries providing estimations on public health. The Czech Republic's data exclude expenditure covered by public health insurance; had this been included, estimations would increase by EUR 4.3 million for medicines, EUR 4.2 million for outpatient care and EUR 21.7 million for inpatient care.

The overall total amount estimated on health (EUR 828 million) by the Czech Republic, France, Luxembourg, Poland and the United Kingdom sharply contrasts with the amount estimated for public order and safety in the same countries: EUR 6.07 billion (Table 5). Consequently, by country, drug-related health expenditure represented quite a low proportion of total general expenditure on health (range 0.03 % to 0.51 %).

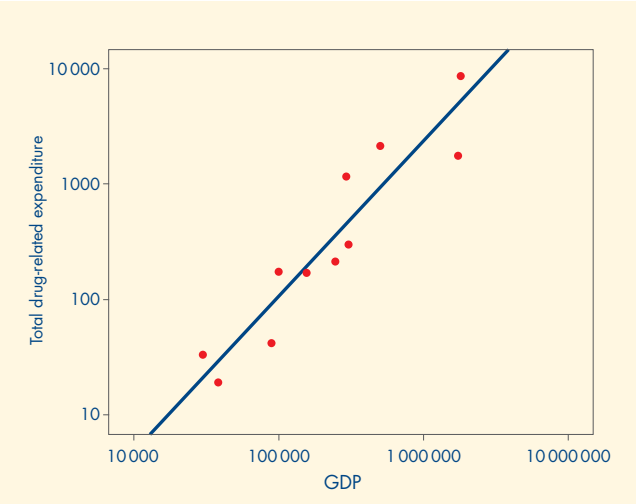
Total drug-related expenditure in Europe

Overall, 11 countries (Belgium, Czech Republic, France, Luxembourg, Hungary, Netherlands, Poland, Slovakia, Finland, Sweden, United Kingdom) accounted for a total amount of drug-related expenditure of EUR 15.4 billion. In the case of Sweden, not reporting on this Selected issue, the overall expenditure was taken from the EMCDDA 2007 *Annual report*.

By country, total drug-related expenses ranged from EUR 20 million to 8 700 million, representing between 0.10 % to 1.09 % of total general government expenditure, and between 0.05 % to 0.48 % as a proportion of GDP. The absence of comparable approaches in estimating the non-labelled component of total drug-related expenditure precludes any further comparison of individual figures among countries. For this reason, results by country are avoided in this section.

As displayed in Figure 3 (country identification is not provided to avoid misleading comparisons), when plotted, the total drug-related public expenditure reported shows a high linear association with GDP (R = 0.85): the higher the GDP, the higher the total drug expenses. The equation resulting from running a linear regression through the origin between the variables 'Drug expenditure' and 'GDP'

Figure 3: Scatter plot showing the linear relation between total drug-related expenditure and GDP (EUR million)



Source: Eurostat, 2005 (GDP).
Reitox national reports, 2007 (total drug-related expenditure).

takes the form: 'Drug expenditure = 0.003 * GDP' (95 % confidence interval for B = 0.002 to 0.004) — this is Equation 1. This means that on average, for each million EUR of GDP in a country, EUR 3 000 is publicly spent on drug-related matters (95 % confidence boundaries would be between EUR 2 000 and 4 000 in this example).

This level of GDP expenditure (0.3 %) is much higher than the value suggested by the seminal contributions provided by Kopp and Fenoglio (2003). According to their estimates, public expenditure related to drugs at the time generally represented about 0.05 % of GDP (range 0.02 %–0.13 %). A later work on the topic by Postma (2004) confirmed the trends suggested by Kopp and Fenoglio on overall public expenditure in Europe, with most of the percentage of GDP ranging from 0.02 % to 0.15 %. These differences are certainly explained by the lack of figures for the countries considered at the time. The current report is the result of a more comprehensive and accurate analysis of expenditure, mainly due to the dual approach based on the identification of labelled and non-labelled expenditure.

Estimation of total public expenditure in Europe

Previously, the total drug-related public expenditure by European countries in 2005 was calculated to lie somewhere between EUR 13 billion and EUR 36 billion (EMCDDA, 2007). This figure was estimated by extrapolating the total drug-related expenditure of six countries (Belgium, Hungary, the Netherlands, Finland, Sweden and the United Kingdom) to the other under-reporting states. With the supplementary information provided by the Czech Republic, France, Luxembourg, Poland and Slovakia, and the new data provided by the United Kingdom, a single point estimate and new confidence interval (CI) has been calculated. By applying Equation 1 to the countries without current information on total expenditure, the new estimate of total public expenditure in Europe is EUR 34 billion (95 % confidence interval EUR 28 billion to EUR 40 billion).

Conclusions and recommendations

Several countries have a considerable amount and quality of information on drug-related public expenditure that they make available, facilitating public analysis and debate. Overall, EUR 15.4 billion of drug-related public expenditure was identified in 11 countries in the year 2005, representing between 0.05 % and 0.48 % of their GDP.

By extrapolating these figures to the rest of the countries (n = 19), the total drug-related public expenditure in Europe for 2005 was estimated to be EUR 34 billion ([6]) (95 % CI EUR 28 billion to EUR 40 billion), which is equivalent to 0.3 % of the sum of the GDP of all of the countries (95 % CI 0.2 %–0.4 %). This means that on average, for each EUR 1 million of a European country's GDP in 2005, EUR 3 000 were publicly spent on drug-related matters. This represents an average expenditure of EUR 60 per European citizen per year.

For labelled expenditure, the percentage of total expenditure explicitly labelled as drug-related in the budget and/or fiscal year-end accountancy reports consulted varied from 1 % to 47 %. This large variation implies unequal levels of budget accountability on drug-related issues across European countries. Belgium and the Netherlands presented information on labelled and non-labelled expenditure at an aggregate level. No information on labelled expenditure was available for Bulgaria, Spain, Italy, Latvia, Sweden, Turkey and Norway.

Labelled expenditure identified came mainly from the COFOG functions for health (67 %) and public order and safety (22 %). This pattern of labelled expenditure was confirmed when disbursements were classified according to programme purpose using Reuter's (2006) definition: treatment programmes accounted for the majority of the outlays, followed by enforcement and prevention. A very tiny fraction of expenditure was identified as harm reduction.

Prisons (31 %) and police services (16 %) covered the majority of labelled expenditure on public order and safety, while law courts accounted for only 0.06 %. On health, labelled expenditure related mainly to outpatient (68 %) and hospital (16 %) services, followed by medical products (7 %) and public health services (7 %).

In contrast with these findings, the non-labelled estimations obtained suggest a different balance in the allocation of money between health and public order and safety. The overall total amount estimated on health (EUR 828 million) sharply contrasts with the amount estimated by the same countries on public order and safety (EUR 6.07 billion). By country, while non-labelled drug-related expenditure on police services, law courts and prisons represented between 2 % and 11 % of total general government expenditure on public order and safety, the same percentages ranged only from 0.15 % to 1.25 % in the case of labelled expenditure on the same functions. The range of percentages over the total general expenditure on health were more comparable (0.03 %–0.51 % of non-labelled expenditure versus 0.02 %–0.8 % of labelled). This means that, despite public order and safety functions attaining higher levels of expenditure than health functions, health expenditure is more present in accountancy documents. Thus it can be said that, in general, health expenditure on drug-related issues is more distinct than expenditure allocated to law enforcement issues. Although this can easily be explained by the fact that expenditure on public order and safety tends to be embedded in broader and more general programmes of action against crime, one must remember that an assessment of the efficiency of government action is not feasible without a clear and well-defined formulation and classification of expenditure, where costs are properly identified in the relevant budget appropriations. The budget is the financial mirror of government policy; if the budget excludes important expenditure, there can be no assurance that scarce resources are allocated to priority programmes and that proper control and public accountability are enforced.

Limitations of the study and future developments

The figures presented in this Selected issue should be taken as indicative and not definitive. Unfortunately, budget lines on drug-related issues are still too generic, too aggregated, over-inclusive, or simply unidentifiable, making labelled expenditure a sub-estimated fraction of the total expenditure identified.

([6]) This figure only represents general government expenditure. The total cost to society is likely to be much higher.

The enticement of placing European expenditure identified in an international perspective is high, but the incompleteness of the current data precludes it. For instance, while the total amount of labelled expenditure reported by the countries covered by this study totalled EUR 2.42 billion, its labelled counterpart in the United States of America (USA), the Federal Drug Control Spending, amounted to EUR 10.08 billion (USD 12.6 billion ([7])) for the same fiscal year (Carnevale Associates, 2008). The difference observed clearly illustrates the non-comparability of the figures ([8]).

The lack of standardised, complete estimations on non-labelled expenditure further contributes to the non-comparability of results across countries. For example, for the present report NFPs were requested to provide, on a voluntary basis, the elements needed to estimate non-labelled expenditure. Eleven countries (37 % of the total) reported estimations on the public order and safety government function, and nine countries (30 % of the total) on the health function. The estimation strategies employed by these reporting countries were very varied in both depth and breadth, making direct comparisons of figures by country inappropriate. As already mentioned earlier in this report, the UK NFP provided the most exhaustive estimation exercise of all the countries, including elements of estimation that went beyond those originally requested. As a result, the UK figures of non-labelled public expenditure are much higher than other countries. This fact clearly draws attention to the need for further standardisation of the non-labelled component of public spending.

Furthermore, the disbursements identified here mainly refer to public expenditure made at central government level (regional and local government expenditure accounted for just 9 % of the total labelled expenditure identified); the future inclusion of sub-national government expenditure will certainly increase the amounts of public expenditure presented in this report.

Caution is also needed when considering the conclusions obtained from the results of the regression analysis of GDP to total public expenditure (Equation 1). Drug-related public expenditure is a component of GDP, thus, all things being equal, an increase of public drug-related expenditure will raise GDP by the same amount. The calculation in Equation 1 is based on the assumption that drug-related public expenditure depends on a country's GDP. Is this hypothesized causal relationship plausible? The statistically significant regression results found do not necessarily establish a causal relationship between GDP and public expenditure. Although the statistical computations used to produce the estimated measure of association (R=0.85) are appropriate, the estimate itself may be biased. Such bias may result from not considering in the analysis other variables that can account for the observed association, such as the size of the drug problem in the country, the political orientation of government, or the model of state. The resulting biases can distort the true value of the correlation coefficient and lead to a false conclusion on the relationship between the variables involved in the analysis. Should this occur, a deeper assessment of the plausibility of the causal relationship between GDP and total expenditure must be performed.

Studies on public expenditure require a fair amount of analytical work for the labelled component, and require a certain degree of creativity as far as non-labelled expenditure is concerned (Luxembourg National report, 2007). Altogether, this means that comprehensive approaches to precisely estimate public expenditure are currently beyond the technical, resource or human capabilities of some Reitox national focal points. This situation should be resolved over time by providing simple, clear and straightforward guidelines on how to proceed in identifying labelled and non-labelled expenditure. The EMCDDA can play a leading role in this action by compiling the different strategies available for identifying expenditure, based on the experiences reported by the countries who have already carried out this exercise.

To conclude, work must continue in order to build upon and enhance the data available and to complete and refine figures on public expenditure. The twofold methodology proposed and implemented by the EMCDDA in this Selected issue, although preliminary, has proven to be feasible and scientifically robust.

The flip side of drug-related public expenditure

Public expenditure figures are ultimately intended to enhance policymakers' decision-making on drug policy. But decision-makers must be very careful and refrain from taking decisions based on raw public expenditure figures without carefully trading-off the alternatives involved or without a sufficient evaluation of the possible consequences of spending choices. The simple identification of an area of low (or high) expenditure cannot in itself suggest inefficiency. An inefficient allocation of resources exists when the resources concerned could generate greater benefits if used elsewhere, but without an understanding of the benefits gained, it is not possible to assess whether expenditure in a particular area is efficient or not (Maynard, 2004). As introduced in the first

([7]) USD to EUR Interbank rate average (365 days) in 2005: 0.80

([8]) In 2005, the total population for the 30 countries covered by this study was 572 million (*Source:* Eurostat), while the USA population for the same year was just under 300 million (*Source:* US Census Bureau).

section of this report, public expenditure studies represent important intermediate stages in economic evaluation since they provide an understanding of the size and composition of cost programmes and interventions. Public expenditure approaches must then be complemented by undertaking economic evaluations where expenditure is considered in the perspective of the benefits obtained by its allocation.

In addition, another consideration is that public expenditure may not be the only way to deliver certain services or to achieve particular drug policy objectives. For instance, in many countries health and social policy interventions are likely to involve private stakeholders (i.e. patients, families, insurance companies, NGOs). International comparisons of resources devoted to achieving drug policy objectives in these areas will be highly misleading if no account is taken of such costs.

There is still a great need for further research and investment in this particular field of drug economics in Europe. Nevertheless, with an increasing international interest in the development of the discipline and more economic and human resources allocated to it, the European knowledge base in the area will increase steadily over time.

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Budget (1)

The official statement that the general government makes about how much public expenditure there will be in the next fiscal year and how it will be financed.

COFOG (2)

The Classification of the Functions of Government. This is an international categorisation tool used to identify the socioeconomic objectives the general government units aim to achieve through a range of outlays.

Direct drug-related costs (5)

General drug-related costs can be divided into two major categories: direct and indirect. Direct costs are those costs for which payments are made, and typically include expenditure in the areas of prevention, treatment, harm reduction and law enforcement.

Economic evaluation (3)

The comparative analysis of alternative actions in terms of both their costs and consequences.

Effectiveness (2)

The extent to which an action achieves its intended purpose.

Efficiency (1)

The extent to which maximum output is achieved from a given level of resources used to produce an action.

GDP (1)

The gross domestic product is an economic indicator that quantifies the economic activity of a country. It is calculated by adding the market value of all goods and services produced by the economy during a given period, including private consumption, investment, public expenditures, private inventories, and the foreign trade balance (exports minus imports).

General government (2)

The general government of a country is the set of institutional units producing non-market services for individual/collective consumption and redistributing income and wealth. It mainly consists of central, regional and local government units together with social security funds. In addition, it includes non-profit institutions engaged in non-market production that are controlled and mainly financed by government units or social security funds.

Gross costing (4)

A costing method that follows a 'top-down' approach where a global cost-indicator is used to determine the total costs of a cluster of activities.

Indirect drug-related costs (5)

Indirect costs are the value of productive services not performed because of drug use. These typically consist of lost productivity due to drug-related morbidity and mortality.

Labelled drug-related expenditure [5]

The *ex-ante* planned public expenditure made by the general government in the budget that reflects the voluntary commitment of a country in the field of drugs.

Micro costing [4]

A costing method that follows a 'bottom-up' approach that involves the detailed inventory, measurement and valuation of all the separate cost-items involved in a given activity.

Non-labelled drug-related expenditure [5]

The non-planned, *ex-post*, public expenditure faced by the general government in tackling with drugs, that is not identified as drug-related in the budget.

Opportunity cost [2]

The opportunity cost of a resource equals the value of the forgone benefits that would be obtained if that resource would have been available for its best alternative use.

Public expenditure [1]

The value of goods and services bought by the general government of a country in order to execute each of its socioeconomic functions.

Social cost [5]

Drug-related social costs are the total of all of the costs to society, direct and indirect, caused by drug use. The output, expressed in monetary terms, is an estimate of the total burden that drug use places on society. The primary aim of social cost calculations is to weigh the burden that drug problems pose on society against the cost to society of addressing these problems.

Total drug-related public expenditure [5]

The value of all the goods and services bought by the general government of a country in tackling drugs. It is calculated by adding labelled and non-labelled drug-related expenditure. The estimation of total drug-related public expenditure is a different exercise from that of estimating social costs. Total drug-related public expenditure represents only a proportion of social costs, mainly in the form of direct costs; indirect costs are explicitly excluded, as are costs from private stakeholders (e.g. private health-insurance companies).

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The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is one of the European Union's decentralised agencies. Established in 1993 and based in Lisbon, it is the central source of comprehensive information on drugs and drug addiction in Europe.

The EMCDDA collects, analyses and disseminates factual, objective, reliable and comparable information on drugs and drug addiction. In doing so, it provides its audiences with an evidence-based picture of the drug phenomenon at European level.

The Centre's publications are a prime source of information for a wide range of audiences including policymakers and their advisors; professionals and researchers working in the field of drugs; and, more broadly, the media and general public.

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