***Part of Introductions – for public expenditures***

Estimating public expenditures in a particular country remains dependent on the state of information systems and the availability of data and should consider the national guidelines for the economic calculation (Kopp, P., 2015).

Drug-related programmes and activities can be found at many different government levels; drug-related expenditure is frequently embedded in programmes with broader goals, explained in part due to the health, social and economic components of the drug phenomenon; the reactive nature of some drug-related expenditure, as for example, consequences of drug use and trafficking (police or law court services) cannot be easily forecasted and thus are not susceptible to having separate budget lines in appropriations. The amount of these forms of embedded expenditure can only be estimated through modelling approaches (EMCDDA, 2008).

Comparing allocation of funds within policies and within different countries

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 (EMCDDA, 2008).

Regardless of the way countries have chosen to implement the supply reduction measures established by the UN Conventions, the effect of different approaches is still undetermined, and may jeopardise comparison between countries. If we consider prohibition versus legalization, on the one hand, consumption and the negative effects increase, and on the other, violence, so characteristic of illegal markets, would decrease (Kopp, 2006).

Whatever the political choices are, all countries have a national drug policy and allocate significant resources to it. Based on the studies undertaken by Kopp & Fenoglio (2003) regarding *per capita* public expenditures on the fight against drugs in a number of European countries and the United States, Kopp (2006) observes a certain convergence within the 70%-30% ratio, amongst the countries, 70% for supply reduction and 30% for demand reduction.

Countries that have implemented decriminalization claim that driving away the stigma of criminality from the consumption of illicit drugs allows for earlier interventions and an health-based approach with significant results on health indicators (Ló, A. & Albuquerque, S., 2015) and less criminal effects due to consumption and possession for individual use. Gonçalves & *all* (2014) observe significant reduction in the Portuguese drug non-health related direct and indirect costs over the period between 2000 and 2004, namely legal system (direct) costs associated with criminal proceedings from drug-law offences and, particularly, (indirect) costs associated with lost income and lost production of individuals imprisoned for drug-law offences. They refrain, however, from drawing conclusions in regard to the clear causal relationships due to the implementation of the new Portuguese National Strategy for the Fight against Drugs (NSFAD), following which the drug decriminalisation policy was put into place.

The call for further humanisation and revision of drug control policies (e.g. liberalisation, decriminalisation, flexibility for introduction of various drug control models minimising harms and costs) must be viewed in light of the increased focus on the harmful consequences. While the aim of this research undertaking, as set out in the terms of reference (Message to the PC’s, P-PG/COST (2015)4 October 2015), is not to judge different drug policy regimes or to propose drug policy reforms, it can’t be overlooked that different policies and approaches may have likewise different outcomes and consequences, particularly over individuals caught using illicit drugs. This puts additional challenges in comparing allocation of funds within policies and within different countries.

Estimating drug-related public expenditure poses a series of challenges. One is that only a small part of drug-related public expenditure can be traced back directly to a government’s budget and accountancy documents. Another challenge is that when a country develops a national estimate of drug-related public expenditure it often does not have access to the full desired data set. When this exercise is transposed to the European level, the availability of comparable and harmonised data becomes even more limited (EMCDDA, 2014).

Pacula & *all* (2009) concluded that it is not possible to develop a meaningful comparative estimate of the cost of drug use across countries or to aggregate these costs to the regional or global level, despite considerable work done in some developed countries to quantify the social cost of drug abuse. These differences are due to political and social environments which influence not only the types of harms considered in those calculations, but also the relationship between drug use and the harm (e.g. harm reduction strategies influencing the relationship between injection drug use and the spread of HIV/AIDS). Methodological differences in the measurement of harms, the inclusion of intangible costs, and the time horizon in which harms are evaluated leads to further inconsistencies.

Regardless the variety of factors which undermine the robustness of the findings, including lack of data, layering of assumptions and changes in the epidemiological knowledge base, Single, E. (2009) argues that economic cost estimates should nonetheless be conducted and continually refined, as the detailed findings are of great utility to the design and targeting of prevention programming and policy.

Heijink (2006) reaches the same assumption regarding the comparability of cost-of-illness (COI) studies. He concludes that the fact that COI studies are limited to aggregate levels, , does not mean that there is no room for improvement. The use of a common reporting framework as provided by the System of Health Accounts (SHA), accounts developed by OECD to improve comparability of health expenditure among countries, will facilitate cross country comparisons.

Because cross-country comparison encounters more difficulties because of conceptual and methodological differences in expenditure measurement across countries, Lievens & *all* (2012) emphasize that the cross country comparison show that a uniform methodology is necessary to estimate the public expenditures in different countries.

The result of the series of on-going symposia organized by the Canadian Centre on Substance Abuse (CCSA) with the support of a variety of regional, national and international organisations was a general framework for the development of cost estimates. Superficially, a COI study involves combining an epidemiological database with financial information to generate an amount valued in monetary terms which purports to say something about the costs to society of a particular disease. Studies of the economic costs of substance abuse (COI) are described as (1) a type of cost-of-illness study (2) in which the impact of substance abuse on the material welfare of a society is estimated by examining (3) the social costs of resources expended for treatment, prevention, research and law enforcement, plus (4) losses of production due to increased morbidity and mortality, plus (5) some measure for the quality of life years lost, relative to a counterfactual scenario in which there is no substance abuse. Each part of this statement bears elaboration. (Single, E. & *all*, 2003).

To measure in monetary units the cost of unintended harms, as well to monetize the consequences of illicit drug use, presents increased challenges. It requires a common approach and commonly agreed guidelines, such as the international guidelines that were produced for estimating the costs of substance abuse, based on the cost-of-illness studies, the framework that has guided work of this kind for several decades. The focus is on issues of economic modelling and on epidemiological issues involved in estimating deaths, hospitalizations and crime attributable to substance abuse.

Monitoring results and outcomes

The problems of comparison and commensuration are addressed by placing monetary values on drug-related harms. The obstacles to effective monitoring of drug policy include a shortage of robust data, the need to develop a rational and effective system for weighting and comparing different kinds of drug-related harm, and a lack of consistent methodologies to enable comparisons to be made between different drug policies (Roberts & all, 2006).

According to Carnevale Associates (2008), for drug control policy to be most effective, it must both be evidenced-based and supported by a budget specifically designed to implement it. 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 (EMCDDA, 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). 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 (EMCDDA, 2008).

Rising the awareness of necessity for doing estimation of public expenditure because is often seen as lots of money is spending what is not always right.

International guidelines for estimating the costs of substance have now been used in national studies in four continents, with more consistent and comparable results than in previous studies. Although the bottom-line results have been used to argue for alcohol and drug issues having a higher place on the public policy agenda, the real value in such studies lies in the detailed results regarding mortality and morbidity attributable to substance abuse, the relative contribution of acute versus chronic conditions to overall problem levels and the role of substance misuse in adverse social consequences, such as crime and economic productivity.

The Economic Impact of Illicit Drug Use on American Society carried by the National Drug Intelligence Center is an emblematic illustration how estimating illicit drugs public expenditures serve the purpose to design and refine policy (NDIC, 2011). The assessment was conducted within a Cost of Illness (COI) framework. As such, it monetizes the consequences of illicit drug use, thereby allowing its impact to be gauged relative to other social problems. Unlike other health problems, illicit drug use consequences may include criminal sanctions.

Direct and indirect costs attributable to illicit drug use were estimated in three areas: crime, health, and productivity. Because it is possible to characterize productivity lost to drug-induced incarceration and drug-induced homicide as either crime or productivity costs, a “scenario” was provided for each method of accounting.

Both scenarios include three components, Crime, Health and Productivity and yield the same result. On the base model scenario, incarceration and homicide are components of productivity and are not included in crime. On the alternative model, incarceration and homicide are components of crime.

The following table shows how the different cost instalments were aggregated or broken down.

Table

Economic Impact of Illicit Drug Use on American Society in 2007

(Costs are in thousands)

|  |  |
| --- | --- |
| **Base model scenario** | **Alternative scenario** |
| **Crime Costs** | **Crime Costs** |
| Criminal Justice System | Criminal Justice System |
| Crime Victim | Crime Victim |
| Personal | Personal |
| Property | Property |
| Other | Other |
|  | Productivity |
|  | Incarceration |
|  | Males |
|  | Females |
| Crime Costs Subtotal $61,376,694 | Crime Costs Subtotal $113,277,166 |
| **Health Costs** | **Health Costs** |
| Specialty Treatment | Specialty Treatment |
| State | State |
| Federal | Federal |
| Hospital and Emergency Department | Hospital and Emergency Department |
| Non-homicide | Non-homicide |
| Hospital | Hospital |
| Emergency Department | Emergency Department |
| Homicide | Homicide |
| Hospital | Hospital |
| Emergency Department | Emergency Department |
| Insurance Administration | Insurance Administration |
| Other | Other |
| Federal Prevention | Federal Prevention |
| Federal Research | Federal Research |
| AIDS | AIDS |
| Health Costs Subtotal $11,416,232 | Health Costs Subtotal $11,416,232 |
| **Productivity Costs** | **Productivity Costs** |
| Labour participation | Labour participation |
| Males | Males |
| Females | Females |
| Specialty Treatment (State) | Specialty Treatment (State) |
| Males | Males |
| Females | Females |
| Specialty Treatment (Federal) | Specialty Treatment (Federal) |
| Males | Males |
| Females | Females |
| Hospitalization | Hospitalization |
| Males | Males |
| Females | Females |
| Incarceration |  |
| Males |  |
| Females |  |
| Premature Mortality (non-homicide) | Premature Mortality (non-homicide) |
| Males | Males |
| Females | Females |
| Premature Mortality (homicide) |  |
| Males |  |
| Females |  |
| Productivity Costs Subtotal $120,304,004 | Productivity Costs Subtotal $68,403,082 |
| **Total $193,096,930** | **Total $193,096,930** |

*Source: NDIC, 2011*

The cost components allows drawing inferences for policy matters, namely that screening and brief intervention activities, the provision of effective and broadly available specialty treatment and the diversion of nonviolent drug users into alternative specialty treatment settings whenever possible is less costly than the cost of crime and lost productivity.

Social costs

Public expenditure is one element of the social cost of the drug problem. Together with private and external expenditure, they constitute the total social cost of drugs in society. Estimated cost usually includes the size of the drug market, public expenditure and social costs (premature mortality and loss of productivity). This part of study will focus only on public expenditure for several reasons.

Knowledge and data on social costs at European level is limited and the methodology is still under development. Therefore, there is no a complete picture of the situation in the assessment of social spending in Europe. That is why it is not possible to compare between different countries. Social costs are defined as the resources spent by various social entities due to consequences of drug use.

References for social costs research are based on the publication by WHO from 2003 (Single et al., 2003) on international guidelines for estimating the cost of substance abuse and a book of French authors Pierre Kopp and Philippe Fenoglio from 2002. For social cost studies, it is important to determine which categories will be taken into consideration and what sort of data we have in determining social costs because it can greatly affect the results of the study.

Social cost of drug use is *“an estimate indicating the resources which have become unavailable to the community because of drug use, and which could be used elsewhere if the drug problem was suppressed”* (Single et al., 2003, p.28-29). The concept of social costs refers to the overall costs borne by society due to the existence of the drug phenomenon. Social costs include costs caused by the demand as well as the supply side regardless of the source from which the cost stems (private and public) (Kopp & Fenoglio, 2002). The perspective of society and not the perspective of the public authorities is the point of departure.

Social cost is defined as the sum of public expenditure, private expenditure and external expenditure (Kopp & Fenoglio; 2002; De Ruyver et al., 2004; De Ruyver et al., 2007).

**Chapter Public expenditure**

The drug phenomenon is multidimensional, consisting of many aspects ranging from health (epidemiology, prevention, treatment) and legal problems, drug-related crime and security issues (use of drugs in traffic, drug-related public nuisance) to economic problems (loss of productivity, absenteeism on the work floor). All these different problems bring costs for the individual and the community (De Ruyver et al., 2004). A part of these costs is borne by the public authorities responsible for the different policy areas in the field of drugs.

Predominant part of drug policy measures have to be undertaken by the government institutions, which implies that the measures should be financed by the government, but it is quite unknown how much the government is spending on dealing with drug problems.

Even though the main areas of activities aimed at meeting drug policy goals are defined in the strategic documents, it is not always clear what amount of money the government is spending on each of the areas. The data deficiency described in literature brings up quantification as one of the methodological problems in assessing efficiency of drug-control policies (Greenfield & Paoli, 2012). In their attempt to examine the drug policy approaches, effects and consequences, (Strang et al, 2012) concluded there are few studies providing evidence for effective interventions.

It is less often estimated what amount of taxpayers' money is spent to reduce drug use and related problems, whether the distribution of that money according to the type of program reflects drug policy priorities, and whether the effects of those programs justify public spending. Drug policy could not be formulated and implemented without indicators of its effectiveness, and this paper represents an attempt to discuss possible tools for estimate of the composition of the government's drug policy spending on programs.

Studies on public costs have a potential to provide insight into how the drug budget is composed. Moreover, in view of the growing demands for accountability and evidence-based policy, these studies show whether the government’s stated priorities for drug policy are mirrored in their actual expenditures. Secondly, the potential role of public expenditures studies increases with a comparison over time, and thirdly with a cross-country comparison. These comparisons may provide important insight into the dynamics of drug policy.

Benefits of public expenditures studies should also be recognize as the base for modelling costbenefit analyses as the tool for comparison of achieved results and outcomes of drug policy whit spend funds and linking public expenditures to indicators and objectives established in the strategic documents, in order to assess the impact of the drug policy and justifiability in relation to results achieved. To see benefits, there is also a need to see what the social costs are for individuals and society, and what would be these costs/damages if there is no drug policy activates. Studies could develop a methodology for monitoring the efficiency of public expenditure for drug policy and introduce a system based on the achieved results and outcomes. This can also include the definition of a set of indicators and outcomes that determine whether they achieved the planned results and outcomes and justify whether the results achieved and outcomes spent public funds.

Definition of public expenditure, subject of analysis and methodology applied differ in existing studies. In addition, the study of public expenditure is complicated further because confusion exists between the public expenditure studies and studies on the social cost of the drug phenomenon. Different concepts and definitions are used in literature for term public expenditure

Public expenditure is defined as investments or budget lines of public authorities on actions expressly and directly ‘labelled’ for drug policy actions (De Ruyver et al., 2004, 2007). 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) (EMCDDA, 2008).

To estimate public expenditure different methodological steps could be taken.

For each study, it is necessary to define the goals, scope, and what it is we actually want to measure. It is necessary to determine who are the subjects that consume resources (1) the private sector: drug users, patients who attend various counselling and treatment and/or consume drugs, private insurers; 2) the public sector: government, regional and county services that are included in implementation of the program, centres for social welfare, the police, the judiciary, the prison system; 3) society: cost due to loss of productivity and premature mortality.

The first step in the preparation of cost estimates studies is the definition of the geographical area, the types of drugs on which we discuss, the cost and definition of categories of claims (mortality, physical health, mental health, and environment). Research can be conducted by way of an analysis of documents and data, questionnaire and interview of major stakeholders in the area of combating drug abuse and drug addiction.

The second step consists of identifying the major players responsible for drug policy and the classification of public expenditure. To classify public expenditure it is necessary to identify the competent authorities in order to establish where the expenditure is coming from. To know for which ends public expenditure is used, expenditure needs to be classified according to the different drug policy sectors.

Studies on public expenditure require a significant amount of analytical work and certain degree of creativity. Altogether, this meant that comprehensive approaches to precisely estimate public expenditure are sometimes beyond the technical resource or human capabilities.

When estimating public expenditure on drug policy, need to be note that such expenditure is often embedded in policy projects with broader objectives. Therefore, it is important to look beyond the expenditure exclusively used for drug policy and also include spending intended for broader policy domains.

Kopp and Fenoglio (2003, p. 23) and the EMCDDA (2007) use other terms to refer to expenditure exclusively used for drug policy and the expenditure intended for broader policy domains but the terms used are analogous. Kopp and Fenoglio (2003) use the term ‘direct’ and ‘indirect expenditure’, while the EMCDDA (2007) refers to ‘labelled drug-related expenditure’ and ‘non-labelled drug-related 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.

Labelled expenditures are those which are identified as such in the budget. Calculation methods are not required for labelled drug-related budgets. Time series data for this category of expenditure are provided on a regular basis. There also exists a large amount of non-labelled expenditure which clearly belongs in the category of drug-related policy. Usually the most important part of drug-related public expenditure is embedded in broader expenditure categories (e.g. police services or hospitals) and needs to be estimated with the help of models and secondary data sets. This type of expenditure is commonly referred to as ‘unlabeled expenditure’.

Labelled expenditures on drug policy are budget items, which the individual budgetary organisations of state administration keep in their budget. Non-labelled are the expenditures, which are not directly intended for the addressing of drug-related issues, but they are still involved in addressing drug-related issues.

All the reviewed studies attempt to estimate these two types of public expenditure. Nevertheless, all studies emphasise the difficulty in calculating expenditure that is embedded into a broader budgetary structure (Reuter et al., 2004). Furthermore, data on such expenditure requires a detailed study.

The following step in the public expenditure estimation process is the identification of the public authorities competent for aspects of the drug policy. The public authorities, public services and subsidised private actors (NGO’s) responsible for the policy areas on the different competency levels have to be inventoried.

In general, studies take into account their own specific state and governmental structure and analyse the expenditure on drug policy of the different public authorities responsible for the policy areas. In sum, only those competency levels involved in drug policy and investing in drug policy are included.

Authors (Kopp & Fenoglio, 2003; De Ruyver et al., 2004; 2007) stress the importance of taking into account the different levels of competence (federal, regional, local) when estimating public expenditure as in every country the division of competences in the field of drug issues differs and is spread over different policy domains (epidemiology, prevention, treatment, law enforcement and others).

The key element in public expenditure is the public authorities’ financial contributionto the drug policy. This implies that a public expenditure analysis proceeds from the perspective of the different public authorities who are competent for the respective aspects of the drug policy.

Depending on the state structure, expenditure from the federal government as well as the expenditure of regional, provincial, municipal authorities and associated public services has to be included (Kopp & Fenoglio, 2003; De Ruyver et al., 2004; De Ruyver et al., 2007).

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.

According to the EMCDDA reports, 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 (EMCDDA, 2008.)

When insight is gained into the sources of the expenditure, one can start collecting data on budgets. The identification of public authorities involved in drug policy has to enable the classification of public expenditure based upon the source where the expenditure is coming from. After this exercise, public expenditure has to be classified according to the different sectors in drug policy. Methods of calculation are not homogenous across programmes. Estimates are calculated by the authority responsible for carrying out the programme. For some programmes, estimates on drug-related direct costs are based on a bottom-up approach, and for others, the method of calculation is based on a top-down approach.

Generally, a bottom-up approach is used to estimate the costs of service usage whereas top-down costing is more amenable to estimating the society level costs which are often intangible and where data is scarce.

The top-down approach is based on a simple calculation: divide total expenditure (quantum of funding available) for a given area or policy by total units of activity (e.g. patients served) to derive a unit cost. The units of activity are specific to the services that are being costed, for example the cost of a prison place, GP consultation, or social work assessment. Typically this approach uses aggregate, budgetary data to estimate a unit cost. The advantages of the top-down approach are:

* Availability of data: the availability of budgetary data means that top-down approaches can be applied easily;
* Simplicity: the calculation required to estimate unit costs is easy to understand and direct, providing a simple way to quantify the administrative and overhead costs associated with a range of public services and
* Low cost: the availability of aggregate cost data means that the time and costs required to estimate a top-down unit cost are minimal.

There are, however, two main limitations associated with a top-down approach. First, it does not identify what drives costs and therefore often masks the underlying factors that determine why unit costs vary within a single yet heterogeneous group of service users - for example, children in care. Second, top-down costing cannot be used to reliably forecast how costs might rise or fall as a result of changes in that way that people use services (e.g. the intensity, duration of service usage) or how costs might change due to improvements in outcomes.

The bottom-up approach provides a greater level of granularity than the top-down method. It involves identifying all of the resources that are used to provide a service and assigning a value to each of those resources. These values are summed and linked to a unit of activity to derive a total unit cost – this provides a basis for assessment of which costs can be avoided as a result of reduced demand.

The advantages of using a bottom-up approach are:

* Transparency: detailed cost data allows potential errors to be investigated and their impact tested – this facilitates the quality assurance process;
* Granularity: detailed cost data can highlight variations in cost data, and enable practitioners to explore the drivers of variation and determine whether, for example, some service users account for a disproportionate share of costs;
* Versatility: the methodology enables a practitioner to forecast how costs may change as a result of a reduction in service usage or demand.

However, the main disadvantage associated with the bottom-up approach is that it is labour intensive; the cost, time and expertise require to apply it may be prohibitive for providers.

De Ruyver et al. (2004, 2007) and Postma (2004) explain the top-down approach as a method that starts from the resources or overall budgets made available by the different public authorities involved in the drug policy. First, the public authorities have to be identified. Then, the data on the public authorities’ drug budgets are collected and analysed. This top-down approachstarts with an analysis of the budget lines of the public administrations.

The second method of analysis is the bottom-up approach. De Ruyver et al. (2007) refer to the bottom-up approach as an approach thatstarts from the activities in the work field and traces the money flow back to the public authorities funding. The organisations working in the drug field have to be identified first after which, rather than analysing documents relating to the drug budget, data are examined on the basis of the means of the private (NGO’s) and public organisations and other yearly reports, complemented by questionnaires and interviews with these organisations (De Ruyver et al., 2004, 2007).

Most of the public expenditure studies apply a top-down approach and thus only identify the public authorities and not the organisations working in the field. The only study that is exclusively bottom-up is the study of Kopp (2003). The Belgian studies (De Ruyver et al., 2004, 2007) are the only studies which combine both approaches. The advantage of this double method is that it makes verification possible; the data gathered on the basis of the top-down approach can be double-checked and completed with the data retrieved from the project actors in the field.

The question in public expenditure studies is how much the public authorities are spending on the drug policy and for which ends such expenditure is used. Public expenditure studies reveal the existing activities and policy approaches and can evaluate whether the policy intentions are actually reflected in the drug budget. Therefore, it is essential to classify public expenditure based upon the purpose which the expenditure is intended for (Reuter et al., 2004).

Therefore, it is proposed to use 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 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. (EMCDDA, 2008)

Detailed 3-levels structure of COFOG includes financial flows of the public finance, which are going from state and local (regional and municipal) budgets to non-profit organisations (NPOs) with drug-policy programmes. COFOG is a functional classification used by SNA 1993 (System of National Accounts 1993). COFOG is useful international classification for spatial comparison (between countries) and for time comparison (over time) also. COFOG is in practice very similar. In principle, its units of classification are individual transactions. This means that each outlay (purchase or transfer) should be assigned a COFOG code according to the function that the transaction serves. This principle is valid for both transfers capital (investment) and current (non-investment) transfers. The extensive structure of COFOG contrasts with the four-category division introduced by Reuter (2006) based on the likely effects of services provided by drug policy programmes (i.e. prevention, treatment, enforcement and harm reduction). The Reuter’s programme division is classification of the recipients (NPOs) with drug-policy programmes.

Example of an overview of public expenditure groups broken down according to the main public functions pursuant to the international classification of the functions of the government at the third level is shown in Table 1. (Budak et al., 2013).

*Table 1. – Public expenditures according to the classification of public functions*

|  |  |
| --- | --- |
| **Public functions** | **Public functions at the third level of classification** |
| 01 General public services | 014 Basic research |
| 03 Public order and safety | 031 Police services |
| 033 Law courts |
| 034 Prisons |
| 07 Health | 071 Medical products, appliances and equipment |
| 072 Outpatient services |
| 073 Hospital services |
| 074 Public health services |
| 075 R&D |
| 09 Education | 091 Pre-primary and primary education |
| 092 Secondary education |
| 094 Tertiary education |
| 095 Education non-definable by level |
| 096 Subsidiary services to education |
| 10 Social protection | 105 Unemployment |
| 106 Housing |
| 107 Social exclusion |

Labelled public expenditures sholud usually include all public expenditures containing in their name the key words “combating drug abuse and drug addiction”, “social reintegration”, “addiction treatment” and similar activities listed as special programmes, activities or project in the state budget, budgets of local and regional self government units, financial plans of public bodies and budgets of other institutions with activities aimed at different aspects of combating drug abuse. Activities conducted by public bodies in the area of drug policy and financed from state or county budgets, could be grouped according the division provided by Reuter (2006).

Reuter et al. (2004, p. 35) suggested that it could be useful to split up the conventional sectors into finer categories and pointed to expenditure on enforcement where distinctions can be made between the different levels of the criminal justice system.

Labelled public expenditures can be split into five groups of activities: addiction prevention, treatment, social reintegration, harm reduction programmes and penal system, and as total public expenditures in the area of combating drug abuse into five main public functions in line with international classification of the functions of the government (COFOG) of the United Nations, namely general public services, public order and safety, health, education and social protection. Presented as spending on the supply side (repression), expenditure for demand reduction and drug-related harms, expenditure on research and expenditure for international organisations.

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. (EMCDDA, 2008)

Not all drug-related expenditure is identified as such in national budgets or yearend reports. Non-labelled drug-related expenditure can be estimated following a different modelling approach.

Unlabelled expenditure refers to unplanned spending and usually was estimated through modelling techniques, based on a top-down budgetary procedure. Starting from overall aggregated expenditures, this procedure estimates the proportion causally attributable to drug use (Unlabelled Drug-related Expenditure = Overall Expenditure × Attributable Proportion).

For the estimation of expenditure intended for broader policy domains and included in a broader budget an additional calculation is required since this expenditure cannot simply be extracted from the budget. The application of repartition keys is needed to isolate these areas of spending. Kopp and Fenoglio (2002) point out that there is no general methodology to determine repartitions keys. The determination of a repartition key depends on the case.

In practice, the appropriaterepartition key for illicit drugs can be determined in different ways: on the basis of information from registration systems, annual reports, contacts with the work field. In some cases no detailed data on budgets is available. In this case it is impossible to apply a repartition key. A calculation on the basis of ‘unit expenditure’ is needed here (De Ruyver et al., 2007).

Type of intervention that are discussed for the purpose of this paper are connected to the public expenditure on the supply reduction side (Law enforcement, Public order, Security, Police, Prosecution, Conviction, Prison, Courts, Legal system, Customs, Judicial system).

Supply reduction public expenditures according to the classification of public functions are under public order and safety. According to Reuter (2006), enforcement programs either reduce the demand for drugs by raising the transaction costs of buying drugs or lower the supply of drugs by making trafficking and production more difficult and risky. Main goal is to identify the total drug law enforcement related public expenditures including the unlabelled ones.

This model could serve to compare the drug supply reduction spending composition with the ones in the countries for which similar exercises have already been carried out. The results can show whether the programs that are proclaimed the highest priority get the most financing. Also if this estimation is going to be done in a systematic manner this could serve as useful tool for the assessment of efficiency of the current model of drug supply reduction and national drug policy. The benefit can be seen in filing the gap between the lack of quantitative measures of drug policy effectiveness and government priorities.

This work can fills the gap between the lack of quantitative measures of drug-control policy effectiveness and blank policy recommendations and helps in setting government priorities (Strang et al., 2012).

However, since it is of our primary interest in this part of paper to get an insight into the structure of supply reduction public expenditures we can try to draw some conclusions on the structure of other governments ‘spending on drug policy, based on those studies that use the Reuter categorization of drug expenditures and assess total (labelled and unlabelled) drug expenditures.

Findings of those studies show that law enforcement gets (Švaljek & Budak, 2014) the highest proportion of public funds in most of the countries for which the assessment has been carried out. The share of spending on law enforcement programs has gone down from 56 to 45 percent; whereas the share of treatment went up by ten percentage points. 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 (EMCDDA, 2008).

The budget records usually do not allow for direct capturing of all supply reduction public expenditures. Thus funding of particular programs can be found in the budget, yet some activities are "hidden" in other budgetary items. To assess the total supply reduction public expenditures, one has to identify both the specified (labelled) expenditures and non-specified (unlabelled) expenditures in this area.

Most public bodies do not have in their budgets public expenditures intended for supply reduction activates that are all labelled, i.e. there are no special-purpose programmes, activities and/or projects and a plan for allocation of appropriate resources to activities but they are still financed within regular activities.

So if the estimation is going to be done, each ministry and other central and local government units and institution supposed to be involved in supply reduction activates need to detect labelled expenditures as specified in their annual budgets. The institutions had to classify budget expenditures by public functions and by the type of program as well.

Public function Public Order and Safety at the third level COFOG classification containing following functions; 031 police service, 033 Law courts, 034 Prisons. Labelled public expenditures for supply reduction need to be estimated from the state and county budgets and financial plans.

Despite the fact that budgets of these public bodies to not allow for a conclusion on the amounts spent on supply reduction activates, for many public bodies (Law enforcement, Public order, Security, Police, Prosecution, Conviction, Prison, Courts, Legal system, Customs, Judicial system) it can be well said that a part of their total resources was intended for this activates. Such expenditures, called unlabelled public expenditures hereunder, are therefore to be estimated because they cannot be identified and extracted from the data on the public body budgets.

The methodology for estimating unlabelled public expenditures used in Croatian study on public cost (Budak et al., 2013) is based on the assumption that unlabelled public expenditures make a part of public expenditures which remain after labelled public expenditures for combating drug abuse are deducted from total public expenditures of a public body. The part of public expenditures relating to unlabelled expenditures can be established approximately by using certain indicators of the expenditures allocated to combating drug abuse. The calculation of unlabelled expenditures of a public body is conducted using the following formula (Budak et al., 2013):

*Unlabelled expenditures = indicator\* (total expenditures – labelled expenditures)*

The indicators applied herein are based on adequate data assessed to refer to the total amount of resources of a particular public body intended for combating drug abuse. These indicators are relative figures establishing relationship between an amount strictly connected with drugs and the respective area.

When selecting the indicators, data contained in publicly available international databases should be used in order to enable the application of the methodology of similar indicators in other countries and in the following years. When international sources are not available, publicly available national statistics and data from competent public bodies can be used. In this way respective indicators used for estimating total unlabelled expenditures and expenditures by public functions (COFOG) have been applied.

The indicators are based on adequate data assessed to refer to the total amount of resources of a particular public body intended for combating drug abuse. These indicators are relative figures establishing relationship between an amount strictly connected with drugs and the respective area.

Available database and potential indicators for Drug Related Public expenditures related to expenses from police, law courts, convictions etc. can be found below in Table 2.

*Table 2. – Examples of international and other types of databases, which can be used for estimation of the Public expenditures*

|  |  |  |
| --- | --- | --- |
| **Level of estimation** | **Examples of databases** | **Data’s of estimation** |
| International | **WHO Database** | * **Global Information System on Resources for the Prevention and Treatment of Substance Use Disorders** (include information about: [Prevalence and Burden of Disease](http://apps.who.int/gho/data/node.main-euro.A1211?lang=en&showonly=RSUD), [Monitoring and Surveillance](http://apps.who.int/gho/data/node.main-euro.A1221?lang=en&showonly=RSUD); [Policy](http://apps.who.int/gho/data/node.main-euro.A1229?lang=en&showonly=RSUD); [Treatment System And Services](http://apps.who.int/gho/data/node.main-euro.A1233?lang=en&showonly=RSUD); [Pharmacological Treatment](http://apps.who.int/gho/data/node.main-euro.A1280?lang=en&showonly=RSUD); * [Prevention Programmes For Substance Use And Related Harm](http://apps.who.int/gho/data/node.main-euro.A1319?lang=en&showonly=RSUD); [Human Resources And Civil Society Involvement](http://apps.who.int/gho/data/node.main-euro.A1333?lang=en&showonly=RSUD)) |
| **EUROSTAT** | **General government expenditure by function (COFOG)**  COFOG has two levels of classification (United Nations, 2008). The first one classifies expenditure in 10 general functions, one of which is ‘Public order and safety’. The second level classifies expenditure in 69 groups, in which can be found three indicators of interest: Police service, Law Courts and Prisons. The definitions below are provided by the UNODC.  From the general function ‘Public order and safety’:  **Police services**  - Administration of police affairs and services, including alien registration, issuing work and travel documents to immigrants, maintenance of arrest records and statistics related to police work, road traffic regulation and control, prevention of smuggling and control of offshore and ocean fishing;  - operation of regular and auxiliary police forces, of port, border and coast guards, and of other special police forces maintained by public authorities; operation of police laboratories; operation or support of police training programs.  **Law Courts**  - Administration, operation or support of civil and criminal law courts and the judicial system, including enforcement of fines and legal settlements imposed by the courts and operation of parole and probation systems;  - legal representation and advice on behalf of government or on behalf of others provided by government in cash or in services.  **Prisons**  - Administration, operation or support of prisons and other places for the detention or rehabilitation of criminals such as prison farms, workhouses, reformatories, borstals, asylums for the criminally insane, etc. |
| **UN-CTS (Crime and Criminal Justice Statistics)** | Data produced by UNODC have multiple sources. Member States regularly submit to UNODC statistics on drugs (through the Annual Report Questionnaire) and crime and criminal justice (through the annual Survey on Crime Trends and Operations of Criminal Justice Systems). Other data are collected through national surveys implemented by UNODC in cooperation with national governments or are compiled from scientific literature. UNODC also applies scientific methods to maximize the comparability of the data and estimate regional and global statistics. |
| **SPACE** | SPACE unites two related projects: SPACE I provides data on penal institutions and the population held in custody, as well as on certain conditions of detention, while SPACE II collects information on persons serving non-custodial sanctions and alternative measures.  Data are collected every year by means of two questionnaires sent to the equivalents of the Ministries of Justice, the Penitentiary administrations and the Probation authorities of each country in Europe. The collection and validation of these data then takes place at the University of Lausanne, where analyses and interpretations for both projects are formulated through a common methodology. This methodology aims to allow comparisons among States at the European level, by proposing SPACE categories instead of each country’s own national categories, while still including questions regarding the particularities of their specific sanctions and measures. The SPACE project produces two annual reports: SPACE I – Prison populations and SPACE II – Persons serving non-custodial Sanctions and Measures, presenting the data collected and the key points of the results. |
| **European Sourcebook on Crime and Criminal Justice Statistics** | The Sourcebook contains data from 41 European countries regarding the criminal justice systems. The book is structured by six main chapters covering different stages of the judicial system: Police statistics, Prosecution statistics, Conviction statistics, Prison statistics, Probation statistics and, for the 2014 edition, a final chapter on National Victimization Surveys. The data provided is systematically accompanied by texts and notes relative to the specificity of each country and discussing the different challenges attributed to the comparison of the data. |
| **OECD** | The National Accounts of OECD Countries, Main Aggregates covers expenditure-based GDP, output-based GDP, income-based GDP, disposable income, saving and net lending, population and employment. It includes also comparative tables based on purchasing power parities and exchange rates. Data are shown for 34 OECD countries and the Euro area. Country tables are expressed in national currency. |
| **Social Expenditure Database** | The Aggregated dataset is a subset of the OECD Social Expenditure Database (SOCX) database, has been developed in order to serve a growing need for indicators of social protection and social policy. It includes reliable and internationally comparable aggregate statistics on public and mandatory and voluntary private social expenditure. It provides a unique tool for monitoring trends in aggregate social expenditure and analyzing changes in its composition. The main social policy areas are as follows: old age, survivors, incapacity-related benefits, health, family, active labour market programs, unemployment, housing, and other social policy areas. |
| **ESPAD** | Drug abuse prevalence among teenagers in European countries |
| National | **Database of national statistic comity** | Expenditures in different groups, in which can be found some indicators of interest: Police service, Law Courts, Prisons, Medical and social services **in countries, don’t give databases** in international databases: EUROSTAT, UN-CTS, SPACE, European Sourcebook on Crime and Criminal Justice Statistics, OESD |
| **Database of national Police services, Law Courts, Prisons, Medical and social services** |
| Regional | **Annual report Health Department** | Data on Health department expenditures at the regional level , Number of Drug users, who was treated in medical service in region level |
| **Annual report Police Department** | Data on Police department expenditures at the regional level, Number of Drug users, who was arrested for drug crime activity |
| **Annual report Law Department** | Data on Law Department expenditures at the regional level, Number of drug users, convicted of drug-crime activity |
| **Annual report Prison Department** | Data on Prison Department expenditures at the regional level, Number of drug users, who are serving time in prison for drug-crime activity |
| **Annual report Social service Department** | Data on Social service Department expenditures at the regional level, Number of drug users receiving social benefits in connection with drug use |

Unlabelled costs of on supply reduction activates are divided into the activities; criminal justice system and classified on the third level of COFOG classification covering functions public order and safety. Results for label costs one can obtained by using questionnaire, while the estimations of unlabelled expenses can be made by ​​using indicators that are based on available public data from international statistics and indicators that are based on information supplied by the public institutions.

Within public functions public order and safety were assessed unspecified public expenditure spent in combating drug abuse services for police, customs, courts and prisons can be estimate by formula (Unlabelled expenditure = *indicator* \* (total expenditure – labelled expenditure)).

For police services can be assumed that public expenditure can be allocated to drug policy in accordance with the proportion of offenses relating to drugs in the total number of offenses. This is the portion obtained as a ratio of the two available indicators - number of crimes per 100,000 populations and the number of crimes related to drugs per 100,000 populations, and accounted for national percent based on available public data from international statistics for certain year. In order to obtain an estimate of the share of costs aimed at combating drug abuse, these indicators are multiplied by the total expenditures of law enforcement agencies, net of specified expenses for combating drug abuse. In other words, it is assumed that the total

expenses of the law enforcement agencies (not specified expenditures for programs to combat drug abuse) certain percent of expenditures associated with police activities aimed at combating drug abuse.

For customs as an indicator for the allocation of costs as one indicator can be taken the share of custom officers who deal with the problem of drugs in the total number of custom officers, and as a second, proportion of civil servants in the customs dealing with the problem of drugs in the total number of civil servants. As input data for the calculation of the first indicators used data is the number of customs officers who deal with the problem of drugs. But as noted that the custom officers do not invest all their time in the detection and prevention of irregularities, and misdemeanour offenses related cross-border drug trafficking, it should be found which percent of their work time is devoted to such activities, and estimated number of customs officers who deal with the problem of drugs to full-time equivalent. The average of these two shares is applied to the total expenses of the Customs Administration minus itemized expenditures for programs to combat drug abuse in order to obtain an estimate of unspecified expenses of the Customs Administration relating to combating drug abuse.

In court services, an indicator for the allocation of costs can be calculated as the arithmetic average of three relative numbers. These numbers are relative proportion of offenders for offenses relating to drugs in the total number of offenders for offenses, the proportion of people convicted of crimes of abuse in the total number of people registered for the offenses, and the share of convicted persons for offenses relating to drugs in the total number of persons convicted of criminal offenses.

Unspecified costs to combat drug abuse in the prison system can be estimated using shares validly convicted prisoners, perpetrators of crimes related to drugs in the total number of validly convicted prisoners. For example, to estimate the prison drug-related expenditures in a given country, two elements would be necessary: the overall prison expenditures in the country for a given fiscal year, and the attributable proportion of inmates due to drug-related issues. The product of the two will give a rough estimate that can be compared across different countries.

Most of studies feature data collected on expenditure at the different levels of the criminal justice system but do not present the results separately. Results are presented as ‘law enforcement’.

In the Belgian studies (De Ruyver et al., 2004, 2007) the results of expenditure on law enforcement are presented according to the different levels of the criminal justice system. Distinction is made between the levels of investigation, prosecution, sentencing and execution of sentences. Moore (2005), subdivides law enforcement into law enforcement and interdiction. Another example where the use of a repartition key is needed is in estimating the expenditure on enforcement by police, judicial authorities and customs. The fraction of offences concerning violations of drug laws has to be calculated on the basis of the total number of offences. The proportion of working time devoted to criminal cases has to be calculated to determine the proportion of working time spent on violations of drug laws (Kopp & Fenoglio, 2002; De Ruyver et al., 2004, 2007).

In process of building a model for Italian research (Serpelloni et al., 2013) Kopp's approach was used for analyzing the flow of information sources. Their model consists of four components: private or indirect costs (individual costs and costs due to loss of productive capacity) and public expenditure or direct costs (costs of enforcing the Law, social and health costs). The methodologies for the study of these costs use two approaches: Top-Down Approach (Yale Model) and Bottom-Up Approach (Analytical Model). To determine costs of law enforcement they used three different sources of information: data about traffic control and traffic accidents on the streets, police data on people who are caught with drugs for personal use, data on convictions for drug trafficking and data on crimes related to drug trafficking.

In French study methods of calculation relying on monitoring activity records when monitoring records are available for the service concerned, estimates may be based on a “top down” or “bottom up” approach. The estimation method can vary from one activity to another depending on the availability of records. The total expenditure for drug-related activities is aggregated by programme.

The top down approach in this case, the fraction of the overall activity which is devoted to drug use prevention or fighting drugs and drug addiction is known. The authorities can work out the expenditure attributable to the drugs policy even if they are not specifically “drug-related”. In order to calculate an estimate, this fraction is applied to the total cost of staff and regular functioning of the service concerned. For the year 2010, for example, ten percent of police affairs stood for narcotics affairs which involved sixty police units accounting for several hundreds of thousands of hours/police officers. In this example, police expenditures attributable to drug-related activities have been calculated by multiplying the total expenditure of the police services by the fraction of 10 percent.

The bottom up approach the work time spent by staff in charge of supporting drug-related activities or the equipments used have been recorded by the ministerial services. It is the case for example of the hours of prevention interventions in school or the alcohol tests conducted at the driving controls carried out by the Police corps or the National Gendarmerie.

*Literature review*

The term ‘public expenditure’ refers to the value of goods and services purchased/utilized 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]](#footnote-1). Its quantification is a costing exercise undertaken from the government’s perspective.

Literature suggests that drug abuse is one of the major health and social problems in today's society.

European studies on public expenditure use different concepts and definitions to define the term “public expenditure”. In order to compare public expenditure studies throughout Europe, it is important to be clear about the conceptual framework used. It is equally important to define which areas of expenditure lie within and outside the scope of a given public expenditure study. This implies that a public expenditure analysis proceeds from the perspective of the different public authorities that are competent for the respective aspects of the drug policy [4, 14].

Public expenditures on combating drug problems are recognised as a very useful indicator of government efforts in this regard.

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.

Kopp and Fenoglio [9] and Origer [12] refer to expenditure emanating from the public authorities and used for the different policy sectors of the drug policy (law enforcement, treatment, prevention).

Kopp and Fenoglio and De Ruyver and others define the term “drug budget” as being synonymous with public expenditure on drug policy [4, 7, 10]. The drug budget of the public authorities at each different level of competency is analysed.

European States are characterized by their various State structures, and those authors stress the importance of taking into account the different levels of competence (national, regional and local) in estimating public expenditure, because in each country the division of areas of competence in the field of drug issues differs and is spread over different policy domains (epidemiology, prevention, treatment, law enforcement). Given the different State structures of France and Germany, for instance, we would not be able to compare the public expenditure of those two countries if we count only expenditure stemming from the national Government.

The key criterion in determining what counts as public expenditure for drug policy is whether the expenditure is directly related to drug policy actions [3, 4, 12, 14, 15]. Such expenditure can be described as investments or budget lines of public authorities for actions expressly and directly aimed at implementing drug policy.

Postma states that public expenditures are a part of the “direct costs such as expenditures on prevention, research, treatment, rehabilitation, law enforcement and cost of illness” [14, p. 9]. Ramstedt defines public expenditure as “specific expenditures” or “expenditures directly related to actions targeted at some drug Studies on public drug expenditure in Europe: possibilities and limitations related consequences or [...] prevention” [15, p. 330].

Origer excludes the indirect costs and the costs of indirect consequences and defines public expenditures as direct costs only [12]. De Ruyver and others refer to “expenditures expressly and directly labelled for drug policy actions” [4, p. 5].

Consequently, expenditures related to the consequences of drug use are excluded in most European public expenditure studies [3, 4, 9, 12].

Those excluded expenditures are referred to as “external expenditures”. Two categories of external expenditure are distinguished: (a) external expenditure that is not explicitly aimed at drug policy actions but that indirectly supports the drug policy (e.g. expenditure on drug-related crime such as theft, and spending on drug-related treatment such as treatment of infections contracted through use of contaminated needles); and (b) external expenditure arising from loss of productivity and absenteeism in the workplace.

Some authors, however, include a certain degree of external expenditure.

Ramstedt and Rigter, both as cited in Reuter, Ramstedt and Rigter (2004), and Postma (2004) include specific consequences of the drug problem [14, 17]. Postma includes the cost of illness for drug-related diseases (such as infections, heart disease, retroviruses and mental disorders) in his analysis.

In the studies of Ramstedt (2004) and Rigter (2004), expenditures relating to the consequences of the drug problem are limited to drug-related crime such as theft, robbery and traffic offences, and treatment [15, 19]. Ramstedt explicitly states that in addition to the estimation of “specific expenditures”, he also considers “a broader definition of costs where expenditures not specifically defined as drug-related but nevertheless connected to the drug policy are taken into account (e.g. other criminality or morbidity among drug abusers)” [15, p. 330].

Obviously, comparisons between studies including external expenditures and studies not including external expenditures are meaningless if the studies of the former group do not clearly indicate the amount of such expenditure.

The concept of external expenditure is not always presented in studies. Such studies may refer rather implicitly to extern al expenditure by stating that the various governmental agencies and the drug budget spent by public authorities are the key elements of public expenditure and that consequently, expenditure that goes beyond calculating the drug budget is excluded [10, 15, 17, 19].

In line with the definition of public expenditure, private expenditure is excluded from studies of public expenditure.

Private expenditure is the spending of individuals and private organizations, such as the expenditure of drug users and the expenditure of charity funds [3, 4, 19].

In studies of public expenditure in Europe, public expenditure is partly defined by distinguishing public expenditure analysis from social cost analysis.

Public expenditure is one element of the social cost of the drug problem. The sum of public expenditure, private expenditure and external expenditure constitute the total social cost of drugs in society (see next table) [3, 4, 7, 8, 9, 12, 8].

*Table 3. Concept of public expenditure*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Public expenditure*** | ***Private expenditure*** | ***External expenditure*** | ***Social cost*** |
| Direct expenditure by public authorities on street-corner work, prevention work, drug treatment, guidance for drug users, reintegration programmes  (employment) for (former) drug users, expenditure for personnel such as police officers working in drug investigation units, customs officers specialized in detecting drug trafficking and magistrates dealing with drug cases, expenditure for drug coordinators, expenditure on research,  annual financial contributions to the Pompidou Group of the Council of Europe . | Expenditure of individuals and private organizations, e.g. expenditure of drug users, expenditure by private organizations not subsidized by public authorities and expenditure of charity | Expenditure related to the consequences of drug use, e.g. expenditure on drug-related nuisance,  drug-related crime such as theft, robbery, traffic offences committed by  drug users, expenditure on the treatment of infections due to  contaminated needles, treatment of illness contracted through drug use, such as AIDS and hepatitis, expenditure due to loss of productivity, absenteeism in the  workplace. | Total expenditure on the drug  problem at the expense of the community |

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.

In the last few decades, due to very high and increasing public expenditures, governments in many countries have been under pressure to reduce spending and implement budgetary reforms aimed at a performance measurement and a budgetary output and outcome evaluation.

In 1999, the European Union Action Plan to Combat Drugs (2000-2004) stressed that the evaluation of a drug policy needs to be an integral part of the European Union approach to fighting illicit drugs.

The first step in the evaluation process is to measure drug-related expenditures. There is no unique methodology for measuring drug-related expenditures.

Vander Laenen, Vandam, De Ruyver, and Lievens (2011) in a review of the research studies until 2010 about drug-related expenditures in Europe identified only ten papers dealing with this topic, with the first European study published in 2002. In that study Origer analysed drug-related expenditures in Luxembourg and concluded that over a half of the expenditures was used for demand and harm reduction.

Kopp and Fenoglio (2003) tried to spread analysis to measure direct expenditures and indirect drug-related public expenditure in 16 European Union Member States. The available literature highlights the existing problem of performing comparative analysis due to differing coverage and/or methodologies in different countries.

Reuter, Ramstedt, and Rigter (2004) tried to measure public expenditures related to the implementation of drug policy in the Netherlands and Sweden, but concluded that the precision of current expenditures estimates is very low and that the comparison of results lacks credibility. In most of the literature, drug-related public expenditures are divided into four categories: prevention, treatment, harm reduction and law enforcement (for example, Ramsted (2006) in Sweden; Rigter (2006) in the Netherlands; BICEPS (2010) in Latvia; Lievens, Vander Laenen,Caulkins,&DeRuyver (2012) in Belgium, among others).

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).

However, it is only labelled expenditures that can be divided into these categories. Thus the EMCDDA suggests the use of a system based on detailed classification of the government's functions. This research paper contributes by proposing a methodology of using a set of repartition keys for the estimation of expenditures divided in categories according to its purpose (according to COFOG). The application of this proposed methodology in different countries, by enabling the estimation of unlabelled drug-related expenditures in European Union countries, contributes to getting more comparable results among these countries.

Very few research studies manage to divide total drug-related expenditures by the COFOG classification. National focal points or national drug observatories, which are national institutions or agencies responsible for data collection and reporting on drugs and drug addiction in each EU member state, in some countries tried to classify at least part of the total drug-related expenditures according to COFOG for the EMCDDA reports.

Also, the national focal points have not been able to estimate all unlabelled expenditures and also categorise them according to COFOG classification because of the lack of data or indicators for calculation of the attributable proportion for each function. For all that, there are some examples of estimations. One is from Origer (2009), who measured drug-related expenditures for health and public order and safety in Luxembourg in 2008. In 4 2006, an EMCDDA report based on inputs from national focal points made a cross-country analysis of labelled expenditures and unlabelled expenditures for public order and safety and health expenditures for ten European countries. It found that labelled expenditures in European Union member states arise mainly from health (67 percent) and public order and safety expenditures (22 percent). On the contrary, estimated unlabelled expenditures in the analysed countries are relatedmostly to financing public order and safety (88 percent), and to a minor extent to health (12 percent).

Researchers use different approaches to estimating drug-related expenditures. Also, theoretical and empirical studies systematise costs associated with drug addiction as public, private or external expenditures.

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. Also, the paper analyses expenditures according to the functional classification so as to gain an insight into more detailed purposes for which these expenditures are intended.

Also, this report is a valuable resource for all those who need a better understanding of the cost of drug control policies.

The aim of this report is to reevaluate the current approaches and to question the assumptions underling the current international drug control system.

The war on drugs is a policy choice. It is time for all sectors involved to ask governments and UN to achieve a true costs on drugs analysis and explore the alternatives (Introduction of “*Count the Cost briefing*”).

*Discussion*

*Set of tools*

*Reference (Sanja)*

Budak, J., Jurlina Alibegović, D., Slijepčević, S., & Švaljek, S. (2013). Analiza javnih rashoda za praćenje ostvarivanja ciljeva u području suzbijanja zlouporabe droga u Republici Hrvatskoj [Analysis of public expenditure for monitoring achievement of the objectives in the field of combating drug abuse in the Republic of Croatia]. Zagreb: Ekonomski institut, Zagreb

i Ured za suzbijanje zlouporabe droga Vlade Republike Hrvatske.

De Ruyver, B., Casselman, J. & Pelc, I. (2004). Drug policy in figures. Study of the actors involved, cost price calculation and population reached. Ghent: Academia Press.

De Ruyver, B., Van Malderen, S. & Vander Laenen, F. (2007). Study into public expenditure with regard to national drug policies. A feasible plan for the national focal points.

EMCDDA. (2007). Paper presented at the Reitox Academy on public expenditure analysis in the field of drugs, Luxembourg, 11 May 2007.

EMCDDA (2008). Towards a better understanding of drug-related expenditure in Europe, EMCDDA, Selected Issues 2008.

Greenfield, V. A., & Paoli, L. (2012). If supply-oriented drug policy is broken, can harm reduction help fix it? Melding disciplines and methods to advance international drug-control policy. International Journal of Drug Policy, 23(1): 6–15.

Laenen F.V. & De Ruyver B. (2009). The study of public expenditure on drugs, a useful evaluation tool for drug policy, the Belgian example, Paper prepared for the Third Annual Conference of the International Society for the Study of Drug Policy

Kopp, P. & Fenoglio, P. (2002). Calculating the social cost of illicit drugs. Pompidou Group, Council Of Europe Publishing.

Kopp, P. & Fenoglio, P. (2003). Public spending on drugs in the European Union during the 1990s, Lisbon, EMCDDA.

Moore, T., J. (2005). Monograph No. 01: What is Australia’s “drug budget”? The policy mix of illicit drug-related government spending in Australia. Fitzroy: Turning Point Alcohol and Drug Centre.

Postma, M. (2004). Public expenditure on drugs in the European Union 2000-2004, Lisbon: EMCDDA.

Reuter, P. 2006. “What drug policies cost. Estimating government drug policy expenditures”. Addiction, 101 (3), p. 315-322.

Reuter, P., Ramstedt, M. & Rigter, H. (2004). Developing a Framework for Estimating Government Drug Policy Expenditures. Lisbon: EMCDDA.

Single, E., Collins, D., Easton, B., Harwood, H., Lapsley, H., Kopp, P., et al. (2003). International Guidelines for Estimating the Economic Costs of Substances Abuse. Geneva: World Health Organization.

## Serpelloni, G., Gomma, M., Genetti, B., Zermiani, M., Rimondo, C., Mollica, R., Gryczynski, J., O'Grady, K.E., Schwartz, R.P., [Italy's electronic health record system for opioid agonist treatment](http://www.sciencedirect.com/science/article/pii/S074054721300038X), Journal of Substance Abuse Treatment, Volume 45, Issue 2, August 2013, Pages 190-195

Strang, J., Babor, T., Caulkins, J., Fischer, B., Foxcroft, D., & Humphreys, K. (2012). Drug policy and the public good: Evidence for effective interventions.The Lancet, 379(9810),71–83.

Švaljek S., Budak J., 2014. [The Structure of Public Spending on Drug Policy in Croatia: What are the Priorities?](http://www.pilar.hr/images/stories/dokumenti/drustvena_istrazivanja/125/di125_02svaljek.pdf), Društvena istraživanja, Vol.23 No.3, p. 407-425

Recent trends in drug-related public expenditure and drug-related services in France, available on <http://en.ofdt.fr/BDD/publications/docs/nr2012si2.pdf>

*References (Fatima)*

Carnevale Associates (2008), ‘FY02-09 Budget emphasizes least effective ingredients of drug policy’, Carnevale Associates LLC, policy brief, February 2008: http://www.carnevaleassociates.com/Federal\_Drug\_Budget\_FY02\_09\_Trend.pdf

EMCDDA (2007). “The State of the Drug Problem in Europe,” 2007 Annual Report, pp. 12–13, Luxembourg: Office for Official Publication of the European Communities.

EMCDDA (2008). Towards a better understanding of drug-related expenditure in Europe, EMCDDA, Selected Issues 2008, Luxembourg: Office for Official Publication of the European Communities.

EMCDDA (2014). Estimating public expenditure on drug-law offenders in prison in Europe, EMCDDA, Selected Papers 2014. Luxembourg: Office for Official Publication of the European Communities..

Ló, A. & Albuquerque, S., (2015). Decriminalisation: an opportunity to change, Lisbon, SICAD, <http://www.sicad.pt/PT/Intervencao/Materiais/Paginas/default.aspx>.

National Drug Intelligence Center (2011). The Economic Impact of Illicit Drug Use on American Society. United States Department of Justice, Washington, D.C.: April 2011.

Pacula, R.L., Hoorens, S., Kilmer, B., Reuter, PH., Burgdorf, J.R., & Hunt, P. (2009). Issues in estimating the economic cost of drug abuse in consuming nations, Report 3, RAND Europe.

Kopp, P. & Fenoglio, P. (2003). Public spending on drugs in the European Union during the 1990s, Lisbon, EMCDDA.

Kopp, P. (2006). Économie de la drogue, Paris, Éditions La Découverte.

Kopp, P. (2015). Le côut social des drogues en France, OFDT.

National Drug Intelligence Center (2011). The Economic Impact of Illicit Drug Use on American Society. Washington D.C.: United States Department of Justice.

Lievens, D., Laenen, F. V., Caulkins, J. & De Ruyver, B. (2012). Drugs in Figures III - Study of public expenditures on drug control and drug problems, European criminal justice and policy: Governance of Security Research Paper Series, GofS Vol. 7 (Governance of Security (GofS) Research Paper Series), Maklu Publishers, Alperdoon

Single, E., Collins, D., Easton, B., Harwood, H., Lapsley, H., Kopp, P. & Wilson, E., (2003). International guidelines for estimating the costs of substance abuse, 2nd edition, WHO, Geneva.

Single, E., (2009). Why we should still estimate the costs of substance abuse even if we needn't pay undue attention to the bottom line. Drug and Alcohol Review, [Volume 28, Issue 2,](http://onlinelibrary.wiley.com/doi/10.1111/dar.2009.28.issue-2/issuetoc) pages 117–121, March 2009.

*References (Laura)*

1. BICEPS (2010). *Budget and non-budget social costs of drug abuse in Latvia in 2008.* Analytical report by BICEPS for Centre of Health Economics. Baltic international centre for economic policy studies, March.

Available at<http://vec.gov.lv/uploads/files/4d39483928d40.pdf>

2***.*** *Communication from the Commission to the Council and the European Parliament on a European Union Action Plan to Combat Drugs (2000–2004)*

Available at [http://eeas.europa.eu/drugs/docs/ap00\_04\_en.pdf](%20http://eeas.europa.eu/drugs/docs/ap00_04_en.pdf)

3. De Ruyver, Brice, Casselman, Joris and Pelc, Isidor, *Drug Policy in Figures: Study of the Actors Involved, Cost Price Calculation and Population Reached* (Ghent, Academia Press, 2004). (Paris, Observatoire français des drogues et des toxicomanies, 2006).

4. De Ruyver, B and others, *Drug Policy in Figures II: Follow-up Research into the Actors, Public Spending and Reached Target Groups* (Ghent, Academia Press, 2007).

5. De Ruyver, B., Van Malderen, S., Vander Laenen, F. (2007), ‘*Study into public expenditure with regard to national drug policies. A feasible plan for the national focal points’*, report prepared for the EMCDDA, Lisbon.

6. European Monitoring Centre for Drugs and Drug Addiction, EMCDDA 2008 Selected Issue: *Towards a Better Understanding of Drug-Related Public Expenditure in Europe* (Luxembourg, Office for Official Publications of the European Communities, 2008).

7. Kopp, Pierre and Palle, Christophe, *Vers l’analyse du coût des drogues illegales: un essai de mesure du coût de la politique publique de la drogue et quelques réflexions sur la mesure des autres coûts* (Paris, Observatoire français des drogues et des toxicomanies, 1998).

8. Kopp, Pierre and Fenoglio, Philippe, *Calculating the Social Cost of Illicit Drugs: Methods and Tools for Estimating the Social Cost of the Use of Psychotropic Substances* (Strasbourg, Council of Europe Publishing, 2001).

9. Kopp, Pierre and Fenoglio, Philippe, *Le coût social des drogues en 2003: les dépenses publiques dans le cadre de la lutte contre les drogues en France en 2003*

10. Kopp, Pierre and Fenoglio, Philippe, *Public Spending on Drugs in the European Union During the 1990s* (Lisbon, European Monitoring Centre for Drugs and Drug Addiction, 2003).

11. Lievens, D., Vander Laenen, F., Caulkins, J., & De Ruyver, B. (2012).Drugs in figures III, Study of public expenditures on drug control and drug problems. In M. Cools, B. De Ruyver, & M. Easton (Eds.), *European criminal justice and policy (GofS) – Governance of Security Re-search Paper Series*. Antwerp, Belgium: Maklu

12. Origer, Alain, *Le coût économique direct de la politique et des interventions publiques en matière d’usage illicite de drogues au Grand-Duché de Luxembourg*, (Luxembourg, OEDT Focal Point Luxembourg, 2002).

13. Origer, A. (2009). *2009 National Report (2008 data) to the EMCDDA by the Reitox National Focal Point "Grand Duchy of Luxembourg": New development, trends and in-depth information on selected issues*.

Available at <http://www.emcdda.europa.eu/attachements.cfm/att_142760_EN_LU-NR2009.pdf>

14. Postma, Maarten J., *Public Expenditure on Drugs in the European Union 2000-2004* (Lisbon, European Monitoring Centre for Drugs and Drug Addiction, 2004).

15. Ramstedt, Mats, “Estimating drug policy expenditures in Sweden, 2002”, in *Developing a Framework for Estimating Government Drug Policy Expenditures*, Peter Reuter, Mats Ramstedt and Henk Rigter, eds. (Lisbon, European Monitoring Centre for Drugs and Drug Addiction, 2004), pp. 74-90.

16. Ramsted, M. (2006). What drug policies cost: Drug policy spending in Sweden: Work in progress. *Addiction, 101*(**3**), 330–338.

17. Reuter, Peter, Ramstedt, Mats and Rigter, Henk, eds., *Developing a Framework for Estimating Government Drug Policy Expenditures* (Lisbon, European Monitoring Centre for Drugs and Drug Addiction, 2004).

18. Reuter, P. (2006), ‘What drug policies cost. Estimating government drug policy expenditures’, *Addiction*, 101, pp. 315–322.

19. Rigter, Henk, “Drug policy expenditures in the Netherlands, 2003”, in *Developing a Framework for Estimating Government Drug Policy Expenditures*, Peter Reuter, Mats Ramstedt and Henk Rigter, eds. (Lisbon, European Monitoring Centre for Drugs and Drug Addiction, 2004), pp. 37-73.

20. Vander Laenen F., Vandam, L., De Ruyver, B., & Lievens, D. (2011). Studies of public drug expenditure in Europe: possibilities and limitations, published in *UNODC, Bulletin of narcotics: Measurement issues in drug policy analysis*. Volume LX, Vienna, United Nations Office on Drugs and Crime; New York, United Nations.

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 eadings (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 [↑](#footnote-ref-1)