**PUBLIC EXPENDITURE ON SUPPLY REDUCTION**

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**Introduction**

The necessity of evaluation has been globally recognized as one of the key issues in the development of social policy and it has been adopted in most national action plans and drug strategies worldwide. Evaluation research assess to which extend the policy has any impact, and provides a ‘reality check’ to the increased expectations of the new drug policy initiatives[[1]](#footnote-1)

Policy evaluation is a prerequisite and has received a great attention on the EU policy making level and is reflecting the EU values of transparency, participatory democracy and accountability. This trend is confirmed by the recent adoption (in 2014) of an encompassing Framework for Regulatory Policy Evaluation by the Organisation for Economic Co-operation and Development (OECD). EU’s approach to policy evaluation is now characterised by an integration of the policy cycle (linking ex ante and ex post appraisal) and by applying evaluation to all types of policy intervention, expenditure or regulatory policy. applying evaluation to all types of policy intervention, expenditure or regulatory policy (Smismans, 2015).

According to the European Commission evaluation is defined as “a critical evidence-based judgement of whether EU actions has met the needs it aimed to satisfy and actually achieved its expected effects[[2]](#footnote-2)

Public expenditure studies aim to estimate the amount of resources spent, or necessary to implement a particular policy field. If completed with an analysis of the provided public interventions, public expenditure studies may serve as an important input in policy evaluations, i.e. they can reveal to what extent the policy *intentions* are reflected in relevant budgets for interventions. If complemented with an assessment of the funds spent and the policy objectives achieved, public expenditure studies are also an important step in a thorough policy evaluation.

Accurate estimates of public expenditure necessary for implementing drug control initiatives help policy makers to plan relevant interventions and make the required funds available for the authorities in charge of implementing these interventions. The development of improved cost estimates also offers the potential to develop more complete cost-benefit analyses of policies and programmes aimed at reducing the harm associated with the use of psychoactive substances.

Further, for policy makers, ex-post analyses are vital for examining if the funds were allocated as planned and if they were well spent, i.e. if the funds were used in the best possible way to allow supply reduction policies to attain their objectives. Sound planning and cost-effective resource allocation are particularly required in times of economic downturns and reduced available resources. Lack of planning of situational/stakeholder analysis may also lead to mismatch of drug public expenditures with the contextual demands. This could borne unintended consequences to the drug users’ groups as well as the community as well. A sound example of mismatch between resource allocation and the contextual demands is in case of Greece.

In this regard, a key priority is to improve the knowledge base and understanding of how different policies have various effects and consequences at a macro and micro level. Accurate public spending is needed to monitor their impact and to extend the evidence base for what works. Improvement of cost-estimates on public expenditures on supply reduction will be valuable not only for demonstrating successful policy supply reduction initiatives but also as a warning mechanism of their unintended consequences (Papamalis, article submitted).

However, often policy evaluation is directed by political interests or administrative purposes for organizational restructuring and less for its actual effectiveness, thus increasing the gap between research and practice and represents a potential obstacle for effective implementations of evidence based policies.[[3]](#footnote-3)

There is a need for more comprehensive conceptualizations of drug public spending that focuses on the sequential relationships among drug use related harms and their dynamic interplay with the contextual environment. Such methodological framework would allow the extent to which the supply reduction public expenditures are corresponding to the contextual demands and are cost-effective in comparison with other sectors of drug policy.

Achieving resource efficiency requires giving priority to those interventions providing the greatest output per unit cost (EMCDDA, 2008). Efficiency means measuring whether the available resources are used according to objectives, and cost-efficiency requires an estimate of whether interventions obtained the best value for money. This requires considering the relationship between resource inputs (the costs of labour, capital and/or equipment); intermediate (e.g. number of problematic drug users treated) or final outputs (e.g. lives saved, life years gained, percentage reduction in crimes committed) and; policy goals.

Economic evaluations should identify, ~~measure,~~ value and compare in measurable terms the costs and outcomes of the alternatives being considered. Here, the focus is on the costs only, and is confined to public expenditures solely the on supply reduction policies. The acknowledgement of drug related expenditure is a useful step in the process of deciding whether the level and composition of drug-service provided are appropriate.

In Europe, it is aimed today that drug policy should be based on a balanced approach (Council of the European Union, 2012). For instance, public expenditure analyses can be used as an additional tool to assess the balance between supply and demand reduction efforts. Further, the change of the drug phenomena over time can also be explained and interpreted through the scope of public expenditures. Last but not least, a cross-country comparison of the level and composition of drug expenditures may be of use to decision makers too (EMCDDA 2008).

This publication proposes a common set of definitions to be used in the field of drug policy’s public expenditure assessment and evaluation, in order to establish a common basis for understanding such complex subject matter and facilitate the comparability in three main dimensions, time, policy and countries. With this purpose, first, the definitions will be examined; second, the literature in the field of empirical estimates will be reviewed; third, the methodologies applied for estimation analysed; fourth, the sectorial models of public spending presented and; finnaly andto concluding, examples of national studies will be provided.

Therefore, this publication it is likely to be of interest to both those commissioning - or thinking of commissioning - expenditure/cost studies and those carrying out the studies. This may include accounting authorities; entities who are seeking funds to finance their service provision; researchers; officials looking to evaluate drug policy priorities, develop drug policy strategies and action plans; and those involved in the economic evaluation of drug policy.

***Public expenditures***

The term ‘public expenditure’ refers to the value of goods and services purchased/utilised by the general government of a state (at central, regional, local level and social security) in order to perform each of its functions, for instance, it refers to healthcare, justice, public order, education, social protection (Eurostat, 2011). Its quantification is a costing exercise undertaken from the government’s perspective (EMCDDA 2008).

***Comparability of Drug policy expenditure across EU***

The key element of drug-related public expenditure is the financial contribution of public authorities ~~value spent by governments~~ in goods and services with the aim of tackling the harms associated with illegal drug phenomena. Although drug policy expenditure studies are deemed useful, relevant analyses and estimations are complicated since several inter-ministerial and cross-governmental sectors are involved in the drug control programs including education, health, justice, policing and border control, and secondly, are frequently imbedded in broader policy domains and programs. Disentangling drug policy expenditures across governmental departments and inter-sectoral policies remain a scientific challenge.

numerous reasons related to:

* European studies on public expenditure use different concepts and definitions for the term “public expenditure” and for social costs.
* Data scarcity
* Lack of statistical data significantly hinders objective analysis of drug control policy, courts, prosecution and police as they do not perform aggregate analyses. Thus, evaluations are based on separate statistics, which makes them incomparable and questions the validity of the results.
* The comparison of harm statistics across time, between countries or with other available statistics is particularly difficult due to the lack of standardized concepts and the absence of an internationally agreed statistical framework to make such comparisons possible.

Data scarcity:

* National estimation of drug-related public expenditures are conducted by national authorities, without the full data sets required. When data are transported to EU level the availability of comparable and harmonized data becomes even more problematic.
* Statistical data are often organized and categorized according to legal provisions, such as articles in legal or penal codes, which are not always relevant from an analytical standpoint
* Changes in members states legislation and criminalization hamper the comparability across time and jurisdictions.

Drug related costs embedded into broader policy categories

* Usually the most important part of drug-related public expenditure are imbedded in broader expenditure categories or policy domains (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’ (EMCDDA,2005)

Perimeter of social cost differ from country to country

* The perimeter of drug public expenditures also differ form one country to another. The value of human life, the actualisation rate, do not have the same value between countries. The existing studies are so heterogeneous that are not even examining the same perimeter of social cost. The expenses that comes from the supply reduction activities are affected by the organisation of the financing judicial system in every country. Even the rules of public spending’ registration are different, within European Union.

Comparability of drug related expenses between EU states

An additional challenge in the comparability of drug related supply reduction public expenditures is that the expenses related to general crime differ widely among EU countries. Beyond the differences in the definitions of legal concepts and the way they collect, organize and present their statistics, the judicial responses also vary widely in all levels of the judicial process influencing the organization and the responses of the police, court systems, prisons etc.

Comparisons of crime statistics between countries may be affected by a range of factors, including:

• different legal and criminal justice systems;

• the proportion of crimes reported to the police and recorded by them;

• differences in the timing of recording crimes (for example, when the crime is reported to the police, when a suspect is identified, and so on);

• differences in the rules by which multiple offences are counted;

• differences in the list of offences that are included in the overall crime data.

the limited availability of drug-related budget data. Collecting data on drug-related expenditure is challenging because most countries do not produce separate drug-related budgets (with planned and executed expenditures) as part of their ordinary budget routines and also because drug-related programmes and activities can be found at many different levels of the public administration. Therefore, since drug-related initiatives are frequently provided and funded by different levels of the government (for instance, the funding of prisons to drug law offenders is normally provided by the central government, while drug-prevention or social reintegration programmes to deprived children in marginalized neighbourhoods are frequently promoted by local authorities); it is therefore necessary to compile data at different administrative levels to collect data and estimate expenditures on control policy initiatives, what might be demanding in some countries..

Often, only a small fraction ~~part~~ of drug-related public expenditure can be traced back directly to governments’ documents or single budget lines. The required data are instead embedded in budgets for larger sectors or programmes, which implies that closer modelling and estimations are needed. For instance, it is common that prisons do not have a particular budget associated to tackling the drug-law offenders in prison, because they have usually one unique budget for their entire activity. Therefore, the values of this embedded expenditure can only be estimated through modelling approaches (EMCDDA, 2014). This requires skills, modelling tools and techniques. Therefore, to develop an estimate of drug-related public expenditure across Europe it is necessary to define a model that best estimates each type of drug-related public expenditure, taking into account these restrictions and setting standardised calculation perimeters.

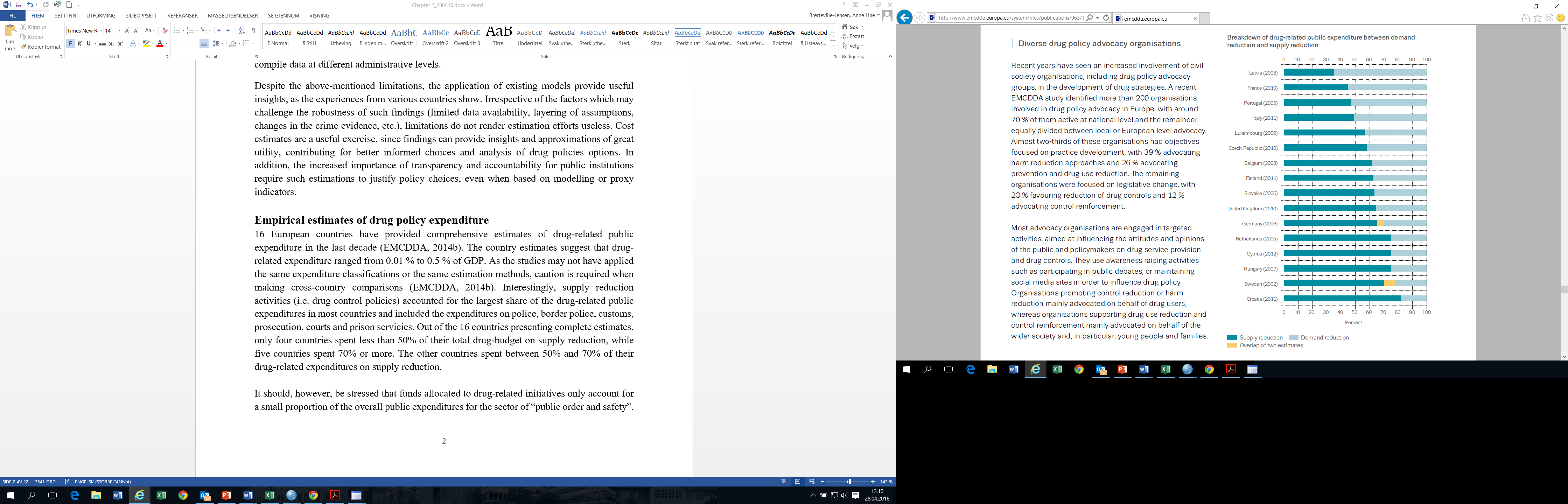
Despite the above-mentioned limitations, the application of existing models provides useful insights, as the experiences from various countries show. Irrespective of the factors which may challenge the robustness of such findings (limited data availability, layering of assumptions, changes in the crime evidence, etc.), limitations could be overcome ~~should be defeated~~. Cost estimates are a useful exercise, since findings can provide insights and approximations of great utility, contributing for better informed choices and analysis of drug policies options. In addition, the increased importance of transparency and accountability for public institutions require such estimations to justify policy choices, even when based on modelling or proxy indicators (Single, 2009).

**Empirical estimates of drug policy expenditure**

In the last decade 16 European countries have provided comprehensive estimates of drug-related public expenditure (EMCDDA, 2014b). Country estimates suggest that drug-related expenditure ranged from 0.01 % to 0.5 % of GDP. As the studies may not have applied the same expenditure classifications or the same estimation methods, caution is required when making cross-country comparisons (EMCDDA, 2014b). In fact, there is an overall consensus that the variability of the estimation methodologies utilised and the different classification of expenditures adopted by each country questions the applicability of cross country comparisons (Concalves et all., 2015; Kopp 2015, Vander Laenen and De Ruyver, 2008). The estimates are not directly comparable because they typically have different objectives, follow different methodologies and use different definitions of public expenditures. Therefore, at the moment it’s very difficult to make any accurate comparisons between EU countries about the drug public expenditures. This is nicely illustrated by Reuter’s critical review where he…

This implies even within country comparisons when different drug public expenditures perimeters are set. A great example is in case of the two studies in France conducted by the same research teams and adopting similar methodologies for estimating the social cost of illicit drugs in France. (Kopp and Fenoglio, 2006 and Kopp, 2015. Between these two studies there is a great difference in the social cost in France between the estimates of 2006 to 2010. The estimates for the illicit drugs in 2006 was 3 billions euros, while in 2010 the estimates were three times higher, 8,7 billions euros. (Kopp,2015). As noted by the authors this remarkable expansion of the « social cost » of drugs between 2006 and 2010 is explained by the amelioration of the epidemiological knowledge and by the modification of these calculation parameters, and not by and any major negative change of the drug landscape in France. The question of whether these differences in costs reflect real differences or are they just a by-product of the different methodologies applied will remain unanswered until uniform guidelines for the estimation of drug public expenditures are adopted ~~in the EU~~.

However, regardless the estimation methodologies and modelling techniques interestingly, supply reduction activities (i.e. drug control policies) accounted for the largest share of the drug-related public expenditures in most countries and included the expenditure on drug related activity on police, border police, customs, prosecution, courts and prison servicies. Out of the 16 countries presenting complete estimates, only four countries spent less than 50% of their total drug-budget on supply reduction, while five countries spent 70% or more. The other countries spent between 50% and 70% of their drug-related expenditures on supply reduction. Despite that, little attention has been given to the disentanglement of the drug public expenditures allocated to supply reduction



**Figure 3.1 Breakdown of drug-related expenditure between demand and supply reduction.**

Source: EMCDDA, 2014b

Although studies consistently indicate that investment to the demand sector such as health and social programs are more cost effective and with greater social benefits for the communities than the supply reduction and law enforcement investment[[4]](#footnote-4) [[5]](#footnote-5), yet most of the countries continue to invest the majority of the available resources on supply reduction measures ~~repression and punishment~~.[[6]](#footnote-6)[[7]](#footnote-7) Studies indicate that at EU level approximately 50 to 75% of the drug budget would be allocated annually on law enforcement and around 25 to 30% on the health sector.[[8]](#footnote-8)[[9]](#footnote-9)Government expenditures on supply reduction strategies displace the funds that could be used for more cost effective and evidence based interventions in demand and harm reduction.[[10]](#footnote-10)

During the economic downturn many EU countries imposed austerity measures which led to reduction in public expenditures. Analysis carried out by the EMCDDA suggests that overall, bigger cuts were more often registered in the health sector than in other areas such as public order and safety or social protection (EMCDDA 2015).

It should, however, be stressed that funds allocated to drug-related initiatives only account for a small proportion of the overall public expenditures for the sector of “public order and safety”. A study from 2005 estimated that supply reduction expenditure represented only between 2 % and 12 % of the total public expenditures in this sector (EMCDDA, 2008).

Under these circumstances it is imperative to provide a framework for the systematic production and comparison of data in order to improve the comparability of drug control public expenditures among European countries. Such methodological framework would allow the assessment of cost-effectiveness and effectiveness of the supply reduction measures and provide the basis for an evidence based resource relocation. Further, it will facilitate the ‘full accounting’ of policy evaluation identifying the policy-drug-use harm nexus by distinguishing the dimensions of harms and examining the extent to which the harms associated with drug use arise directly from the policy environment and the related practices.

**Methodologies for estimation**

Improving estimation methods, agreeing in good practices and finding reliable standardized data will increase and expand the utility of expenditure estimates as analysis over time and across policy areas and countries can be made. Improved data quality and further methodological developments are needed to achieve this.

To this end, we list below broad methodological steps which are desirable to respect in estimates (Single, 2003).

***Objects of estimates and mapping service provision and financing***

Globally speaking, for a viable estimate it is necessary to take the first step of defining the scope of the public expenditure considered. Therefore, the first step in the preparation of cost estimates studies is the definition of the geographical area, the types of substances targeted (drugs, alcohol and tobacco) which function of public provision estimates cover.

***Inventorying service providers***

Second, it is necessary to identify the public entity or institutions responsible for provision of the public service related to the implementation of drug policies, in the scope of this report drug control measures and interventions. The government authorities, public institutions and services, as well as government funded private actors (NGO’s, service providers etc.) responsible for the implementation of drug initiatives on the different competency levels have to be inventoried.

***Mapping financing entities***

Then, the third step is to identify who finances these service providers of supply reduction initiatives. 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 structure of the government, expenditure from all relevant national, regional or local government institutions directly or indirectly associated with drug policy should always be included.

Matching stakeholders responsible for providing drug policy services with their financing entities might be challenging. Sometimes, provision might be under the responsibility of private agents but the financing under the responsibility of the government. Furthermore, sometimes the entities in charge of providing public services are not always obvious and easy to identify. For instance, when there are drug treatment services provided within the army, it happens that the entity in charge of providing health services has its first function national defence. Therefore, estimators might consider whether they should or not include the costs of these activities within supply reduction initiatives or within health provision. Most researchers tend to include the provision of drug-related services, even if provided by less obvious entities. Indeed, attention should be paid to the fact that the same service may tackle several policy purposes and double counting should be carefully considered and avoided.

***Data collection***

The fourth step is to define a strategy to collect the required data on public expenditure. In order to do that, estimators may analyse policy documents and accountancy data. It is also suggested to interview the major stakeholders in the field as a way to have better information about where financial data might be available. The search for international datasets is also strongly recommended.

***Classifying spending***

The fifth step to consider is to drug-related spending according to the function they are serving. It is essential to classify public expenditure based upon the purpose which the expenditure is intended for (Reuter et al., 2004, Eurostat, 2011). Eurostat provides a useful framework to classify public spending according to its purpose (EUROSTA, 2011). To know for which ends public expenditure is used, it needs to be classified according to the different sectors of government relevant to drug policy. Data on public expenditure on drug policy are 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 that are indirectly but significantly contributing to drug policy or have an impact ~~impacting~~ on it. The proportion of these spending that can be directly allocated to drug-related issues is however challenging and requires detailed analysis.

***Data sets***

The use of a consistent categorisation system, preferably based on an international agreed is a desirable feature. The Classification of the Functions of Government (COFOG) is a detailed classification system for the functions or socioeconomic objectives that general government units aim to achieve through a range of outlays (for details see Appendix 2). EUROSTAT has published annual data according to this classification for European countries since early 1990’s. This data source has proved to be relevant and amenable to a wide variety of analytic applications. Examples of other relevant data sets are:

* the EMCDDA (data on drug related crime);
* the Council of Europe (data for prison activity and costs);
* the European Institute for Crime Prevention and Control (data for the crime and criminal justice systems).

According to the EUROSTAT classification of public functions (COFOG), most drug control policy expenditure is accounted under the “public order and safety” class of expenditure. Reuter (2006) proposes an alternative definition.

In the case that not all required data are available in international datasets, national databases should be mapped. Every country has different structures of drug control services provision and financing. National data mapping can be determined in different ways: on the basis of information from registration systems, annual reports, interviews with key experts and/or contacts with the work field (De Ruyver et al., 2007).

A detailed mapping of data available can be demanding and require an intensive use of resources. However, it is a fundamental milestone for any drug control estimate of public spending.

***Labelled and unlabelled expenditure***

Some of the funds allocated by governments for drug-related expenditure are identified as such in the budget (i.e., they are ‘labelled expenditure’). Often, however, the bulk of drug-related expenditure is not identified (‘unlabelled expenditure’) and must be estimated by modelling approaches. The total budget is the sum of labelled and unlabelled drug-related expenditures (EMCDDA, 2016).

Since labelled expenditures are clearly identified in budgets, calculation methods are not required. Time series data for labelled expenditures are often available.

The modelling required to estimate unlabelled expenditures are either based on a *top down* or *bottom up* approach. Frequently, these estimates require the use of activity data to elaborate estimates (ex: number of crime offenses, offenders, criminal cases, prisoners, etc).

***Modelling unlabelled expenditure***

The *top-down modelling approach* is mainly used when the data available on drug-related expenditure are embedded in programmes with broader goals and the fraction attributable to drugs is possible to disentangle. In order to identify the amounts spent to finance drug policy, models define objective criteria to build reparation keys. These models represent the fraction that drug-related spending represents of the broader budget.

*Unlabelled drug-related Expenditure = Overall Expenditure × Attributable Proportion*

There is no general methodology to determine repartitions keys. In practice, the appropriaterepartition key is determined by the object of estimate, data availability and modelling approaches available. Repartition keys are normally determined in different ways: on the basis of information from activity data, extracted from registration systems, annual reports and/or contacts with the work field. (De Ruyver et al., 2007).

An alternative method to estimate drug-related expenditures is to base estimates on the costs of providing one unit of public service, i.e, the *bottom-up modelling method*. This modelling approach starts by detailing how much it costs to provide one unit of service or intervention. For instance, how much does it cost to keep one drug-law offender in prison? Taking into account the different costs borne by the government for running a prison, such as the real costs of state property, prison staff, electricity, water and gas, machinery, etc, it is possible to estimate how much each detainee costs, per day. This sum can then be multiplied by the number of detainees, considering the different costs that each type of detainees may encompass, as the different lengths in prison, different security levels, etc. To get the total expenditure of drug control policy, all cost elements should be identified and summed.

The bottom-up method is particularly appealing when relevant unit costs are readily available. If, on the other hand, every type and element of the drug policy has to be separately estimated, the approach can be demanding and challenging.

**The advantages of the top-down approach are:**

* *Availability of data*: the availability of aggregated 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 can be reduced;
* *Versatility:* the methodology enables a practitioner to forecast how costs may change as a result of a reduction in service usage or demand and how these costs change over time.

There are, however, some 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. The criteria defined for estimating attributable fractions do not always take into account all characteristics that may impact on total final costs, simplifying costs functions. Therefore, these estimates are normally not fully accurate. Nevertheless, they are frequently used and provide valuable proxy indicators for average costs.

**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 a possible quality assurance process
* *Detail*: 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 requires detailed information, both concerning the type of costs associated with the provision of each service (full knowledge of the production function of each public service), and about the unit cost of each of the production factors.

A combination of the two approaches may be preferred. 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.

**Sectorial models of public spending on drug control initiatives**

In addition to collecting labelled public expenditure data, there are also several examples of models applied to identify unlabelled expenditure on drug control in national contexts. In this section, we summarize models used for different drug control policy sectors.

***Police***

Public spending on drug control police services can be identified with a top-down approach. In order to disentangle drug-related expenditure from the total public expenditure on public order and safety published by Eurostat, attributable fractions are calculated with the help of activity data. In the case of drug-related spending on police, authors have used auxiliary data to build these fractions, i.e. data on the proportion of drug-related offenses on the total of offenses. The following variables, available on national and international datasets, are commonly used to estimate these attributable fractions:

1. number of crimes per 100,000 populations and,
2. number of crimes related to drugs per 100,000 populations.

To estimate the share of costs designated to spending on police activity on illicit drugs, this ratio is multiplied by the total expenditures of law enforcement agencies and reduced by any data on labelled expenditure for drug control available.

***Customs***

As for customs services, the share of custom officers who deal with drug control activities and/or the proportion of their working time, compared to the total number of custom officers, has been used as an attributable fraction. As input data the number of customs officers who are involved with drug control activities forms the basis for the calculation. It should however be taken into account that most customs officers do not exclusively allocate their working time to drug control activities. The percentage or at least an average of working time devoted to drug control should be estimated. Then, these indicators are applied to the total expenses of the customs administration (minus any labelled expenditure explicitly directed towards this activity).

***Court systems***

In court services, an indicator for the proportion of public expenditure on drug-supply reduction initiatives from the total of public national expenditure on law courts has been calculated based on the following activity data:

1. the relative proportion of reported drug-related offences compared to the total number of offences,
2. the proportion of convictions for drug-related offenses compared to the total number of convictions, and
3. the share of people imprisoned for drug-related offenses compared to the total number of persons prisoners.

***Prisons***

Unspecified costs to combat drug abuse in the prison system can be estimated using shares of convicted prisoners of overall convictions for drug related offenses. For example, to estimate the drug-law offenses related expenditures in prisons, two elements have been taken into account: the overall prison expenditures for a given fiscal year, and the attributable proportion of prisoners convicted for drug-law offenses.

EMCDDA (2014) provides an example of how public expenditure on drug-law offenders in prison can be estimated. Based on data for public expenditure on prisons provided by Eurostat and data on the number of law offenders provided by the Council of Europe, the proportion of sentenced prisoners who have a drug-law offence as their main offence was applied to total public expenditure on prisons. A range of estimates was calculated, with low estimates considering only those prisoners sentenced for a drug-law offence and high estimates also including pre-trial prisoners. Between 2000 and 2010, this expenditure is estimated to have been within the range of 0.03 % to 0.05 % of GDP, on average, in 22 European countries. By applying these percentages to the whole EU for the year 2010, it can be estimated that the expenditure varied within the range of EUR 3.7 billion to EUR 5.9 billion.

**Examples of national studies**

As mentioned, to get more comparable international results one recommended methodology is the use of repartition keys for categories according to COFOG. In the past, however, only some studies were able to divide the total drug-related expenditures according to the COFOG classification. Today, 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, undertake this as far as possible to classify the drug-related expenditures according to COFOG for the EMCDDA reports.

Several examples of various models have been applied in different national contexts to identify labelled and unlabelled expenditure allocated to drug control initiatives. Due to their national specificities, their external validity has not been tested, but can provide useful models and examples of estimates, while there are no further data collections and estimations exercises implemented.

***Croatia***

The methodology for estimating unlabelled public expenditures used in the Croatian study (Budak et al., 2013) is based on the assumption that unlabelled public expenditures make up the part of public expenditures which remains after labelled public expenditures for combating drug abuse are deducted from total public expenditures of a public body. Unlabelled expenditures were estimated with the support of supply reduction activity data, which were the base for building attributable fractions.

When defining attributable fractions, data used should rather be published by publicly available international databases. This would guarantee possible replications of similar estimates in the years that follow. Where international sources were not available, publicly available national statistics and data from competent public bodies should be used.

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 a relationship between an amount strictly connected with drugs and the respective area.

***Belgium***

Two Belgian studies (De Ruyver et al., 2004, 2007) and a follow up (Lievens et al, 2016) present the results of expenditure on law enforcement according to the different levels of the criminal justice system. Distinction is made between the levels of investigation, prosecution, sentencing, the execution of sentences, coordination and research. Law enforcement was subdivided into (1) actual law enforcement activity and (2) interdiction measures (Moore, 2005). A further areas where such repartition keys are needed are the estimation of expenditure on enforcement by law enforcement agencies, judicial authorities, including prisons, and customs services. Other studies, used similar approaches but estimated the fraction of offences concerning violations of drug laws has to be calculated on the basis of the total number of offences and 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).

***Italy***

In the process of estimating the Italian drug-related public expenditure (Serpelloni et al., 2013) a model was developed for analysing the flow of information sources. This 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). To determine the costs of law enforcement, three different sources of information were used: data about traffic control and traffic accidents, police data on people who were caught with drugs for personal use; data on the number of convictions for drug trafficking and; data on crimes related to drug trafficking.

***France***

In a French study (Kopp, 2015), the applied method relied on analysing activity records wherever available in the concerned services. The estimation method varied from one activity to another depending on the availability of records. The total expenditure for drug-related activities was then aggregated. The applied top-down approach in this case provided an indication of the proportion of expenditure for drug control related activities as compared to the overall expenditures of the institutions and services concerned. This way unlabelled expenditure attributable to drug control policy was estimated. In order estimate, a fraction was applied to the total cost of staff and regular functioning of the service concerned. For the year 2010, for example, 10% of police activities were attributable to control activities, involving 60 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%.

The bottom up approach was also used based on the work time spent by staff in charge of supporting drug-related activities or the equipment used as recorded by the concerned services. It is the case for example of the hours of prevention interventions in schools or the alcohol tests conducted by police forces.

***Luxembourg***

Since 1999 that the social costs of drugs has been estimated with a pre-defined methodology annually in Luxembourg. Estimates include total costs of the consequences of drug use and trafficking supported by public and private agents. Public spending has been accounted within five different headings: prevention, treatment, harm reduction, law enforcement and research. In the law enforcement field, as in other fields, estimators faced both the challenge of accounting for drug-related spending financed by different levels of the general government and; of developing models to extract unlabelled drug-related expenditure from broader budgets (Origer, 2002).

**Russia**

To estimate  public expenditures in Russia (Potapchik and Popovich, 2014)), drug-related model was used, which is used several sources of information. This model included: private and indirect costs (the cost of the individual and the costs due to loss of production capacity) and public spending or direct costs which part is on supply reduction initiatives. These are digragated by spending on law enforcement and the criminal justice costs which induded law enforcement agencies, the federal drug control service and the maintenance of medical departments of sobriety and spending on drug-related fires and road accidents) ). To determine the cost of law enforcement, various sources of information were used: police data on persons, who were caught with drugs for personal use; data on the number of sentences for drug trafficking, and; data on crimes related to drug trafficking.

***USA***

A study on the economic impact of illicit drug use on U.S. American society is an emblematic illustration how estimating illicit drugs public expenditures serve the purpose to design and refine policy (NDIC, 2011). 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 also include criminal sanctions and the resulting consequences and costs which had to be included in the estimations.

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 either as crime or productivity costs, alternative “scenarios” (calculations) were provided for either method of accounting.

Both scenarios include three main components, crime, health and productivity and yield in the end 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 scenario model shows how the different cost instalments are aggregated and broken down (see Appendix 3 for details). It is evident that most costs associated with drug use are in both scenarios and are associated with the illegality of substances. Therefore, the conclusion of the study was that changing the legal status of a substance may lead to a change of costs (NDIC, 2011). This approach illustrates that drug screening, brief interventions, widely available treatment together with the provision of alternatives to incarceration is less costly than the cost of drug related crime and loss in productivity.

The US study adopting the Cost of Illness methodology builds upon the previous work (Harwood et al.,1984;1998) and ONDCP (2001, 2004) in an effort to maintain consistency with the previous research. However, adopting a more sophisticated methodology with more strict prevalence based approach, and applying attributable factors taking into account health estimates including only costs that are reimbursed by public payers and no the sum of all drug induced health costs, differentiating in this way from the previous studies (Harwood et al.,1984;1998) and ONDCP (2001, 2004). Intangible and unmeasurable costs are not included in the current study.

The authors attempted to disentangle drug offence attribution by differentiating the instrumental offences that are inherently drug induced from offences that are not drug induced, increasing in this way the precision of estimates.

However, it’s worthwhile mentioning that in both scenarios a and b the criminal justice costs (56.373,254) and the incarceration costs (48.121,949) without including the loss productivity induced by the incarceration calculating individuals in jail, prison, parole statuses held that considered drug -induced incarceration and applying the attribution factor for different types of offences, still are the most costly and notable figures in the US drug policy. In the b scenario provide some interesting and compelling findings. When the lost productivity attributable to illicit- drug-induced incarceration and drug-induced homicide were treated as crime costs , then the crime cost increased sharply from 61.376,694 to 113.277,616 while productivity costs dropped to ½ from 120.304,004 to 68.403,082. This implies that the drug supply reduction measures in the US is the predominant drug public expenditures. Beyond the direct costs of incarceration that are included in the study, other indirect costs related to redused employment opportunities due to stigma following release, discrimination and family disruption etc were not included in the analysis.

While we see that evidence based approaches still have a small percentage of the expenses allocated to them such as diversion programs, alterantives to incarceration and supervision community policing.

In the US the majority of offenders behind bars have been involved with illicit drugs (Blumstein, 1995). The 1997 Survey of Inmates in State and Federal Correctional Facilities indicates that 83% of all prisoners had some past drug use, 57% used drugs in the month prior to their crime, and 33% reported using drugs while committing their last offense (Bureau of Justice Statistics, 1999a)

Taking into consideration that correctional spending has more than doubled in the last two decades, the high levels of post-release recidivism and poor track of prison rehabilitation and lack of access to treatment while in prison, the drug control measures continue to spend large sums of money on the penitentiary institutions.

Finally, it is important to mention that the US federal and state policies regarding funding of drug control policies and treatment varies considerably. For example the empirical support of the therapeutic justice programs such as the diversion programs and alternatives to incarceration, as they represent low-cost alternatives and their effectiveness on rehabilitating drug users and evidence of cost effectiveness has made many US states to considerable invest on those programs (e.g., Texas, Missouri, New Jersey, Wyoming, Pennsylvania, California, and others).  In Texas, for example, the “Right on Crime” initiative has aggressively sought to reduce prison expansion through investing in alternatives such as diversion programs (see <http://rightoncrime.com/>), and this initiative has been embraced by conservative and liberal political parties and has had a positive impact. These states have adopted an evidence based approach from the Canadian meta-analytic studies (see for details http://www.drugwarfacts.org/cms/Drug\_Courts).

**Disentangling drug public expenditures from policy broader programs and policy domains, will improve effective targeted interventions tailored to the contextualized needs and will enhance evidence informed resource reallocation.**

***Impact of policy change on******expenditure in Portugal***

There are few examples of attempts to estimate the impact of changes in the legal system on drug-related public expenditures and drug-related budgets. The Portuguese study ( Gonçalves et al.,2014) represent an exception as it involves a comprehensive analysis of the situation pre and pro decriminalization period in Portugal. The authors adopting similar calculation methodology for calculating non-health related costs with the France study (Kopp & Fenoglio,2001), examined both direct and non-direct legal system costs. In order to estimate the legal costs, they included police for detection of drug law offences, the court costs associated with legal process of drug law offences and the prison costs associated with drug related offences. The authors found a significant reduction in non-health related costs of drug policy between 2000 and 2004, in particular in the legal system (direct) costs and in the (indirect) costs associated with lost income and lost productivity of imprisoned for drug-related crimes was observed. Whilst these observations highlight significant changes, prudence is still to be exercised in concluding causal relationships related to the new Portuguese National Strategy for the Fight against Drugs (NSFAD).

* Greece example of Resource relocation complete mismatch between contextual demands and drug public spending (if you want I can elaborate with supporting documentation) – this indicates the absence of policy evaluation and specifically drug public expenditures and resource allocation
* Likewise we could mention the case of Belgium that in their drug policy had prioritised prevention, treatment and as last law enforcement while in practice the analysis indicated that the law enforcement preceded all other sectors and budget

**Conclusions**

Government expenditure reflects collective choices stemming from political processes and this varies from one country to another. Whatever the political choices are, all countries have a national drug policy and allocate significant public resources to it.

* Public expenditure studies can show how much the public authorities are spending on drug policy and for which ends such expenditure is used. Public expenditure studies reveal the existing activities and policy approaches. Furthermore, measuring public spending can be used as a a tool for assessing whether policy intentions are actually reflected in action through drug budgets and is a necessary tool for implementing thorough drug policy evaluations.
* For drug policy purposes, an analysis of drug-related public expenditure is relevance since 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.
* While the aim of this report, as set out in the terms of reference, is not to judge different drug policy regimes or to propose drug policy reforms, it cannot be overlooked that different policy approaches may have likewise different outcomes and consequences, particularly as concerns consequences for individuals caught using illicit drugs. This fact must be observed when estimating drug-related public expenditure and looking into cost-benefit ratios.

Existing studies and recent EMCDDA data from 16 EU countries show that the largest share of drug-related public expenditure is allocated to supply reduction activities, representing between 82% and 35% of the total drug spending being an average of 62% of the total drug-related public expenditure.

* Attempts have been made to estimate the allocation of funds for different types of drug-related initiatives, but special caution is required when making comparisons between countries, as studies have still neither applied an harmonized classification of expenditure nor comparable methods to make estimates.
* Failure to disaggregate drug policy expenditures on supply reduction from the broad policy domains is a major obstacle for accurate policy mapping and for the development of more effective drug policy responses

**Recommendations**

1. In order to conduct a meaningful estimation of resources spent on drug control measures and measuring the impact of drug control policies, it would be useful to develop datasets and promote the creation of guidelines for improved data collection in the field and economic modelling of evaluations.
2. It is essential to classify public expenditure based upon the purpose which the expenditure is intended for. It’s therefore useful to use a consistent categorisation system, such as the international Classification of the Functions of Government (COFOG).
3. In order to estimate unlabelled drug-related expenditures a methodology of using a set of repartition keys according to COFOG categories can be used as a starting point. A wide agreement on definitions and methods used will contribute to getting more comparable results among countries.
4. Studies on public expenditure require analytical work needing adequate human technical capacities in place to conduct in the domains of all relevant stakeholders. This is an important factor in obtain the necessary quality of data for aggregation and comparison.
5. Cross-countries comparisons are important, but they are only possible with a common methodology of public expenditure estimates and perimeters.

**APPENDIX 1**

**Available databases and potential indicators for drug related public expenditures**

*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 | **EMCDDA Statistical bulletin**  **and**  **Public expenditure database** | * The EMCDDA statistical bulletin covers a broad range of areas including the most recent estimates of treatment and prevalence, drug-related infectious diseases, high risk drug use estimate, levels of drug related deaths, drug related crime in the form of drug seizures, types of offence, price, purity and use in prison, and country responses to the drug situation in Europe. http://www.emcdda.europa.eu/data/stats2015 * The EMCDDA publishes also the most recent national data on drug-related public expenditures available in Europe. * http://www.emcdda.europa.eu/topics/drug-related-public-expenditure |
| **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, 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 attempts 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 2 years 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. |
| **Social Expenditure Database** | The OECD Social Expenditure Database (SOCX) 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 statistics** | 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 |
|  | **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 |

**APPENDIX 2**

**The international Classification of the Functions of Government (COFOG)**

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 the table below

*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 |

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