# The Structure and The Dynamics of The Illegal Drug Market in Taiwan

**DECEMBER 9**

## 1. Introduction

Historically, drug market analyses have tended to target certain types of drugs that were traded on defined routes used by organized criminal groups that, to a certain extent, had the role of specialized suppliers. Today, however, this picture needs to be extended to take account of the more polymorphic, dynamic and flexible nature of the modern drug markets (European Monitoring Centre for Drugs and Drug Addiction and Europol, 2012[1]). Because drug abuse presents a significant problem, both globally and locally, it is increasingly important to investigate the illicit drug market in order to make timely impacts on different aspects of the market, most of all on the overall supply and demand. However, despite the growing body of illicit drug market related research, there are certain problems that still present an obstacle to understanding the principles of the illicit drug markets.

The first problem is the lack of a unified definition of the illegal drug market. According to Ritter (2005), the term "illegal drug market" is widely used in drug-related research, meaning different things to different researchers. Connoly and Donovan (2014) define the illegal drug market as "a concept involving three mutually loosely connected markets". Firstly, the global or "international market" includes drug production and international trade; secondly, "middle market" involves the import and wholesale distribution of drugs at the national level (Pearson and Hobbs 2001, in Connoly and Donovan, 2014: 29[2]); and, thirdly, the "local market", which includes distribution on a retail level (Lupton et al.[3] 2002; Connoly and Donovan, 2014: 29). All these authors point out that there may be a great overlap of individuals involved in those levels, meaning same individuals can operate on more levels.

Another significant problem is the lack of information on the structure of the distribution process in different countries, the way in which a particular market responds to changes in supply and demand, and the concrete impact of measures aimed at reducing supply and demand for drugs (Natrajan and Hough, 2000[4]). Systematic and regular information on illicit drug markets remains limited, although research in this area have been increasing (European Monitoring Centre for Drugs and Drug Addiction and Europol, 2012). Although there is no lack of research on drug markets at national levels, the problem is that often

[1] European Monitoring Centre for Drugs and Drug Addiction and Europol (2012): EU drug markets report: a strategic analysis. Luxembourg: Publications Office of the European Union

[2] Connoly, J., Donovan, A.M. (2014): Illicit Drug Markets In Ireland. The Stationery Office, Dublin, Ireland.

[3] Lupton, R., Wilson, A., May, T., Warburton, H. and Turnbull, P.J. (2002) Drug Markets in Deprived Neighborhoods. Home Office Research Findings 167. London: Home Office.

[4] Natarajan M., Hough M. (2000): Illegal Drug Markets: From Research to Prevention Policy. National Institute on Drug Abuse, USA.

those researches are not mutually comparable given the type and availability of data in different countries. For instance, in this respect, two significant studies on the said problem on the European Union level have been carried out by Hoorens and Kilmer (2010) and Trautmann, Kilmer and Trunbulla (2013)[5]. Their research has shown that there is a large difference in the European Union countries, among others, in the type and method of collecting and processing data which creates a problem when trying to compare different drug markets. Hoorens and Kilmer (2010) point out other factors that affect this problem, such as significant differences in the type of legal and illegal drug-related problems, differences in the socioeconomic situation, and differences in policy regarding drug abuse issues.

Understanding the illicit drug market is important for several reasons. For political decisions, we need to understand delivery directions, price elasticity and the nature of competition. Knowing the higher levels of the market (production and distribution) can help in designing interventions, ban and other efforts to enforce laws related to drug abuse. At the local level, understanding retail business can help shape and evaluate the reduction of damages, treatment and enforcement of drug abuse laws and their improvement.

Given the recognized drug market levels, there are also various researches that focus more specifically on collecting certain types of data for each individual level. Depending on the objectives of the study, these studies can be divided into two types: surveys of the market for drugs from the supply side (so-called supply side) and studies looking at the drug demand market (so-called "demand side"). (Ritter, 2005[6]). Though there are many studies that provide data on global and regional drug characteristics (World Drug Report, 2010[7]), there is a growing evidence of the need to collect data from the point of view of demand at national or regional levels. The reason for this is the fact that there are many more reliable indicators for the market research of illegal drugs from the point of view of demand (Kilmer and Hoorens, 2010[8]). Another reason lies in the fact that action to reduce the supply of illegal drugs in some countries often involves cooperation with more countries, which creates major problems in terms of

[5] Trautmann, F., Kilmer, B., Turnbull, P. (2013): Further insights into aspects of the EU illicit drugs market. Summaries and key findings. Luxembourg: Publications Office of the European Union.
[6] Ritter, A. (2005). Monograph No 08: A review of approaches to studying illicit drug markets. DPMP Monograph Series. Fitzroy: Turning Point Alcohol and Drug Centre. Australia
[7] United Nations Office on Drugs and Crime (2010): World Drug Report. UNODC, Vienna, Austria.
[8] Kilmer, B., Hoorens, S (Eds) (2010): Understanding illicit drug markets, supply- reduction efforts, and drug-related crime in the European Union. European Commission, DG Justice, Freedom and Security. RAND Europe

administration, different legislation, the possibilities of cooperation, equipment and capacity of individual countries for such a type of activity.

The above-mentioned reasons are just some of the reasons why there is more research and analysis of the illegal drug market from the point of view of demand. One reason is the fact that every drug market depends on factors such as the geopolitical position of the country, the socioeconomic status, the action of different criminal groups, the possibilities of the police and the legislation of a country for concrete action (SOCTA, 2013[9]). The second reason lies in the fact that it is much easier for each individual country to control and act on specific and reliable indicators of the supply of illegal drugs regarding political and legislative competencies. In this regard, there is more research on local and / or regional drug markets (Trautman, Kilmer and Trunbull, 2013), although attention is increasingly being taken and factors affecting local and regional supply (Kilmer and Hoorens, 2010).

## 2. REVIEW OF METHODOLOGICAL APPROACHES TO THE RESEARCH OF THE ILLEGAL DRUG MARKET

A review of the literature (Ritter, 2005; 2006[10]; Trautman, Kilmer and Turnbull, 2013) is possible to outline the four main approaches to the market research of illegal drugs:

• Ethnographic and qualitative approaches

• Economic Approach

• Behavioural and psychological approach

• Criminological / Criminalistic Approach

### 2.1. Ethnographic and qualitative approaches

Ethnography seeks to understand lived experiences, social processes, cultural customs and structural parameters of a group or community. In its traditional form, ethnography includes long-term immersion into the social context of research and is based on sociology and anthropology (as a disciplinary basis). There are different concepts of the ethnographic method (Moore and Maher, 2002)[11]. Ethnographic and more general qualitative approaches are more widely used to document illegal drug markets in order to

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[9] Europol. (2013). SOCTA 2013. The Hague: Europol
[10] Ritter, A. (2006): Studying illicit drug markets: Disciplinary contributions, International Journal of Drug Policy, 17(6), 453-463.
[11] Moore, D., Maher, L. (2002): Ethnography and multidisciplinarity in the drug field. International Journal of Drug Policy, 13, 245-247.

gain more insight into a comprehensive market picture - for example, different roles and market structures, interaction between participants, and social and cultural norms of the illegal drug markets. Ethnographic research can also collect "economic-market data" such as drug price and purity information. The details of the ethnographic research on the behaviour of sellers (Maher, Dixon, Lynskey and Hall, 1998) can be used to estimate mark-ups as well as other price indicators. Qualitative research can also provide information on the various aspects of behaviour of drug market participants (eg., retailers) (Miceskijev, 2001; in Ritter, 2005).

This type of research also uses ecological approaches to improve the understanding of the drug market and the social context in which these markets operate. An example of this is the assessment of damage related to drug use by injecting. The ecological approach seeks to fully understand the environment that consumes the drug by injecting, to examine the physical characteristics of space, as well as social and cultural influences that may affect the behaviour of the drug users and the risks associated with such behaviour (Rhodes, 2002[12]).

The power of the ethnographic or qualitative approach lies in a detailed analysis of the local drug market, the behaviour of different market participants and can detect transaction-related nuances. All this data can be used to develop a model of market functioning. The main limitation of the ethnographic approach is related to the main characteristic of the drug market - each market is unique and one cannot assume that behaviours in one market (both geographically and in personal terms) can be applied to another market - even if it is of the same type drugs. The specificity of this approach is its greatest strength, but also its limitation.

### 2.2.Economy approach

Market research is a core business for the economy. Some of the important economic concepts applicable to the markets include supply and demand curve and their interaction, number of buyers and sellers, product substitution, cost and ease of entry and exit. The economy approach also deals with mapping and understanding of the motivation, opportunities, and decisions of market players. Widespread, but not unreasonable, the assumption is that many legitimate economic principles may apply to illegal drug markets. The obvious advantage of using economic principles for the purpose of studying illegal drug

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[12] Rhodes, T. (2002): The 'risk environment': a framework for understanding and reducing drug-related harm. International Journal of Drug Policy, 13, 2, 85-94

markets is that the economy approach provides a comprehensive theoretical approach. The traditional economic framework covers the systematics of marketing structural terms (monopoly competition, oligopoly, monopoly). The theory of supply and demand relations and the way these categories are changing are crucial for economic access to illegal drugs markets. One of the main problems in the study of the illegal drugs market is the definition of the market boundaries (Ritter, 2005). The application of these economic concepts to the illegal drug markets can bring significant progress to our understanding of the nature of such markets and their boundaries.

The economic framework can also provide us with a useful outlook on drug market research (Wagstaff, 1989[13]; Ritter, 2005). However, at the same time, there is a clear understanding of the limitations of a pure economic approach to drug market research (Nell, 1994; Ritter, 2005). Specifically, it points out the particularities of the illegal drug market that should be considered, which could lead to results that are "accurate only in theory, and not in practice". The economic approach can provide insight into the functioning of both sides of the illegal drugs market: offer (market structure, price movement, profit, import and distribution system) and demand (consumption, price paid, price elasticity, cross-price elasticity of demand). At the same time, economists must use other disciplines to get the full sense of the drug market. The economic approach is also limited to broad market generalization - generic cost analysis, for example, cannot be applied to a variety of drug market types.

### 2.2.1. Economic research on the part of demand

When we talk about the characteristics of demand, we mean the market characteristics associated with potential buyers and their buying decisions. Much of the work in this area is focused on studying the cannabis market, with an emphasis on examining price trends, price elasticity, "cross-cutting" elasticity of demand, complement and substitution as well as some market behaviours. Price is the key feature of the illegal drug market (Caulkins and Reuter, 1998)[14], since price data can be used to test presumptions and characterize the drug market. In addition, the policy of implications can be modelled and contrary to price changes. The research in this area is mainly related to cannabis due to the availability of data on the frequency of taking this drug by population and the inaccessibility of accurate drug price data.

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[13] Wagstaff, A. (1989): Economic Aspects of Illicit Drug Markets and Drug Enforcement Policies. Addiction, 84, 10, 1173-1182
[14] Caulkins, J. P., & Reuter, P. (1998). What price data tell us about drug markets. Journal of Drug Issues, 28, 593-612

### 2.2.2. Economic research on the supply side

Economic research on the supply side is focused on the network of production and distribution, price tagging and the drug-sharing economy. Such research uses the available data on the production and distribution of illegal drugs. Reuter and Greenfield (2001)[15] state that some knowledge from the agricultural economy can be applied here too. The UNODC also seems to support direct surveillance of opium producer countries, using remote research (satellite image analysis) with field visits. There are also indicators of transformation that can help understand the supply side of the illegal drug markets - from opium to heroin production (laboratory efficiency) and heroin - from production to distribution (dispersion and loss in consignments).

However, there are certain technical issues related to the measurement system, which refer to the definition of measuring units (some data are expressed in kilograms, some simply as "units"). In addition, a careful interpretation of the data obtained should be made due to the interaction of various contextual factors, such as common international actions, data-related market disturbances or the decision to ship to end-users. In theory, the World Drug Report should provide standardized global data on illicit drug trafficking. Howeverm, in practice, there are difficulties in verifying the accuracy of some data, and there are complex methodological questions as well as questions of political sensitivity (Kleiman, 2004[16]; Reuter and Greenfield, 2001).

At lower supply chain levels, the economy is used to study the behaviour of drug dealers (Levitt and Venkatesh, 1998; Ritter, 2005; Reuter, MacCoun and Murphy, 1990). Caulkins et. all (1999; in Ritter, 2005) examined the costs and profits from the drug dealer's perspective. They identified four types of retailers: entrepreneurs, independent consignment sellers, consignment sellers and sellers, based on interviews with approximately 300 drug dealers in New York. The research of this type allows us to gain insight into the size and nature of the various sales transactions, the price of the drug sold and the additional costs that come with drug trade.

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[15] Reuter, P., Greenfield, V. (2001): Measuring global drug markets. World Economics, 2, 4, 159-173.
[16] Kleiman, M. (2004): Illicit drugs and the terrorist threat: causal links and implications for domestic drug control policy. Congressional Research Service: Library of Congress

### 2.2.3. Economic Approach to Creating Drug Policy

Economic research can also be useful for testing the drug suppression policy. Clear space for economic research is a study of relative investment and cost savings associated with other interventions in drug suppression policy. There is an extensive literature on this topic, but here we pay attention to only one example of this approach, which explicitly relates to drug market disorders. Wastgaff (1989; Ritter, 2005) discussed the issue of distributing police resources in relation to the drug procurement chain. The question he raised was whether the investment should be more focused on a higher level of the market (importers and wholesalers) or lower (street traders and users)? Being able to answer these questions means understanding the way the drug market operates at (these) different levels.

In the economic approach to assessing the impacts of law enforcement, Poret (2003)[17] argues that even with increased pressure from the police, the number of users in the market may increase. The risks and the price framework are primarily a category of economic approach to police policing (Reuter and Kleiman, 1986)[18], where price is used as a substitute measure of the impact of police efficiency. In this framework, prices pose risks related to arrest and detention (for sale at the local level and resale / smuggling), compensation for the seller's time as well as compensation for risks and injuries related to violence in some markets (Moore et all, 2005)[19]. Pricing data is complex, and the model has not been held over time - despite the increased pressure from the police, a fall in prices of heroin and cocaine has occurred. So, somewhere in our understanding of market prices, the way in which the police operates in the market, and the behaviour of sellers and users - we are making mistakes (Moore et al., 2005).

## 3. Behavioural and psychological approach

Behavioural and psychological approaches to the research of illegal drug markets are important for gaining insight into some contextual factors and it is important to emphasize that these approaches are very close and occasionally overlapping and merging, especially in the field of behavioural economics. Since they come from a psychological, decision-making perspective, Caulkins and MacCoun (2005) describe a model where retailers work with limited rationality - providing an explanation for the fall in

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[17] Poret, S. (2003): Paradoxical effects of law enforcement policies: the case of the illicit drug market. International Review of Law and Economics, 22, 465-493.

[18] Reuter, P., and Kleiman, M. (1986.): "Risks and Prices: An Economic Analysis of Drug Enforcement." In Crime and Justice: A Review of Research, vol.7, edited by Michael Tonry and Norval Morris. Chicago: University of Chicago Press.

[19] Moore, T., Caulkins, J., Ritter, A., Dietze P., Monagle, S., Pruden, J. (2005): Monograph No. 09: Heroin Markets in Australia. DPMP Monograph Series. Fitzroy: Turning Point Alcohol and Drug Centre.

prices of heroin and cocaine in the United States despite the intensification of police pressure. They draw the essential difference between the seller's initial decision to sell drugs and decisions on continuation of sale (Caulkins and MacCoun, 2005)[20] and using probability theory demonstrate differences in risks and benefits (the observed risks deviate from actuarial risks, which can be understood through human decision theory, eg., cognitive prejudice, etc.) (Caulkins and MacCoun, 2003)[21].

Psychological perspective provides research that studies the role of drug users in the market, related social networks and implications for more effective interventions. For example, Johnson, Goldstein and Preeble (1985; Ritter, 2005) intensively studied the behaviours of users and local resellers. Sherman and Latkin (2002)[22] on the other hand questioned the drug users' involvement in lower drug market levels (they called "the drug economy"). They have identified the features (sociodemographic, drug use rates, social networking) of those involved in market roles, unlike those who are not involved (eg., customer only). The interest of these approaches is to study the relationship between drug market roles in order to improve interventions and organize preventive actions.

## 4. Criminological / Criminal Approach to Market Research of Illegal Drugs

The criminological / criminal approach is yet another disciplinary approach to studying the drug market with the most powerful theoretical framework. Eck (1995; in Ritter, 2005) is the most frequently cited author of a criminal analysis of the geography of the retail drug market. His work shows that the kind of marketing (sales to known associates versus sales to strangers) results in different geographic patterns of retail drug markets. The key driver of this model is the balance between availability (for buyers) and security (for sellers). Eck (1995; in Ritter, 2005) argues that the geographic model of retail drug markets can pre-examine the typology of such retail markets and provide a clearer understanding of the impact of drug policy control (such as law enforcement and / or cure).

Criminological / criminal investigations also deal with the evaluation of police procedures. Police have a significant role to play in tackling drug-related problems, and the largest number of strategies work

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[20] Caulkins, J., MAcCoun, R. (2005): Analyzing Illicit Drug Markets When Dealers Act with Limited Rationality. The Law and Economics of Irrational Behavior, Francesco Parisi & Vernon L. Smith eds., in, Stanford: Stanford University Press, 315-338
[21] Caulkins, J., MacCoun, R. (2003): Limited rationality and the limits of supply reduction. Journal of Drug Issues, 33, 2, 433-463.
[22] Sherman, S. G., Latkin, C. A. (2002): Drug users' involvement in the drug economy: implications for harm reduction and HIV prevention programs. Journal of Urban Health, 79, 2, 266-77.

through reducing supply at higher levels of drug markets (such as country-source control) or through efforts by local police forces to break down the drug market's lower levels.

Research by Curtis and Wenedel (2000; in Ritter, 2005) showed that the impact of police intervention differed depending on the market. The number of arrests, the degree of change and the level of local community support varied from market to market. Kerr, Small and Wood (2005)[23] reviewed the dynamic nature of the illegal drugs market and how they can respond to police activity. They believe that a good theoretical model that can show dynamic relationships between drug users, their environment, market operations and interventions (police, treatment, harm reduction) has enabled the creation and implementation of evidence-based drug suppression prevention policy, based practice).

In conclusion, studying illegal drug markets represents a challenge since there is more than one approach that can be used in order to gain more insight into illegal drug markets. Given the aims of this study, attention will be focused on certain indicators of illegal drug market in order to build reliable indicators for the illegal drug market in Taiwan. Using existing relevant research (Conoly and Donovan, 2014; Rhodes et al., 2000; Ritter, 2005; Trautman, Kilmer and Turnbull, 2013; Kilmer and Hoorens, 2010; Natarajan and Hough, 2010; Smet et al., 2013[24]) we will list the indicators used as reliable in terms of studying the uniqueness of illegal drug markets:

- **Market type** - refers, inter alia, to the geopolitical position of a country where an important fact is in what position a country is in relation to the problem of illegal drugs, meaning whether the country is an exporter, an importer or a transit country.
- **Prevalence and incidence of illegal drug use**
- **Characteristics of drug users -** Depending on the target group that is the subject of research, the most common partition is on a general population (such as ESPAD) or a specific group (problem user, recreational user, an intravenous user ...). Defining individual groups is of utmost importance because it illustrates the "weight" of the illegal drug market in terms of the most consumed illegal drugs. In addition, this category also includes information on ways of consummation of illegal drugs, the age of first consumption, the frequency of drug use, etc…

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[23] Kerr, T., Small, W., Wood, E. (2005): The public health and social impacts of drug market enforcement: a review of the evidence. International Journal of Drug Policy, 16, 210-220.
[24] Smet, V., De Ruyver, B., Colman, C., Surmont, T., Pauwels, L., Beken, T.V. (2013): The illicit drug supply in Belgium: What do we know? A feasibility study on reliable indicators for the drug supply (SUPMAP). Institute for International Research on Criminal Policy. Ghent University.

- **Type of drugs** - refers to what types of drugs are available in the illegal market. Such information is most often received by state drug agencies (most often police), but more and more targeted research is being used to gain more objective data on drug-specific delivery in a given area. Also, data is being sought in which all forms of illegal drugs are available.

- **Drug availability** - This involves information about perceived availability and actual availability, the time it takes to get some illegal drugs, the places where drugs are available, and the ways in which all kinds of illegal drugs can be accessed.

- **Drug prices** - specific prices for each type of drug, depending on which units (grams, pills, etc.).

- **Purity of drugs** - is investigated at two levels - the purity of drug seizures in large-scale actions and the purity of drugs purchased on the street (this information is mostly used by police, but also by data collected by independent researchers).

- **The number drug seizures** - depending on the geopolitical environment. The seized number is relevant, but it is also a relevant fact whether the country is a producer, an importer or a transit country. It should be stressed here that it is important to know what quantity is intended for the market of the country that has been seized for each individual drug, but also the purity of seized drugs.

- **Features of drug buying** - what quantities, at what time, at what time intervals

- **Features of drug selling**- in what way, in what places, through which channels

- **The number of discovered laboratories** - although this figure talks about the country's potentials to produce certain drugs, it is necessary to examine for which drug market is intended

- **Number of drug-related offenses**

## 5. Methodology

For the purpose if this report, the primary methodology that was used was analysis of official documentation of various Taiwanese institutions that deal with the drug abuse problem within their respective areas of work. Subsequentially, only resources in English language were used, which can be also viewed as a major limitation of this study. Additional information where retrieved from the peer reviewed and other published documentation by Taiwanese researches or other relevant sources. In order to gain more insight about the acquired data, interviews with members of the Taiwanese Criminal Bureau of Investigations, police officers and researches were conducted. Some information obtained in this way were not used in this report since they were of sensitive nature or not available for public and therefore could be interpreted in different ways or interfere with the ongoing police work.

## 6. Illegal Drug Market in Taiwan

The most important Taiwanese law regarding drug abuse and all other criminal activities regarding illegal drugs is the Narcotics Hazard Prevention Act[25] (in further text NHPA). The main aim of the law, as formulated in the Article 1, is to prevent the hazards of the narcotics and to safeguard the physical and mental health of the public. Furthermore, the Article 2 of the NHPA defines narcotics as "those narcotic drugs and their derivative products that are habit-forming, cause abusive usage, and are a danger to society, and other substances and their products that affect psychological behaviour". Based on their extent of causing habitual and abusive usage, and the level of danger they present to the society, the drugs are put in four categories:

1. Category one: Heroin, Morphine, Opium, Cocaine, and their derivative products
2. Category two: Opium poppy, Coca, Cannabis, Amphetamines, Pethidine, Pentazocine, and their derivative products
3. Category 3: Secobarbital, Amobarbital, Nalorphine, and their derivative products
4. Category 4: Allobarbital, Alprazolam, and their derivative products

The categories and the items described are to be assessed every three months with assessment results reported to the Executive Yuan for any kind of modification and forwarded to the Legislative Yuan for reference. It should also be noted that the management of narcotics and their derivative products as used for medical and scientific purposes, as well as substances that affect psychological behaviour and their products, are regulated under separate provisions.

The NHPA also stipulates sentences for manufacturing, transporting, or selling, possession with intention to sell, compelling others to use, seducing others to use drugs, transferring narcotics to others as well as using and possessing drugs that are mentioned in the categories. According to the NHPA, for these offences even a death sentence can be imposed for example, for persons found guilty of manufacturing, transporting, or selling Category one narcotics or persons found guilty of compelling others to use Category one narcotics by means of violence, coercion, deception or other illegal methods. For the rest of the criminal acts that are mentioned in the NPHA, the sentences vary from life imprisonment, minimum and maximus prison sentences to fines.

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[25] https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=C0000008 – retrieved on October 28th, 2019

There is one curiosity within the NHPA that is not usually found in similar acts in other countries. Namely, Article 15 of the NPHA stipulates that civil servants convicted of committing offenses described in Article 4 Paragraph 2 (Offenders of manufacturing, transporting, or selling Category two narcotics) or Article 6 Paragraph 1 (Persons guilty of compelling others to use Category one narcotics by means of violence, coercion, deception or other illegal methods) under the pretexts of their authority, opportunities, or means given to the position shall be punished with a death penalty, or life imprisonment. Civil servants sentenced with life imprisonment under this article may be fined for no more than 10 million NTD.

It seems that Taiwan is one of the rarest countries to have civil servants specifically mentioned in context of manufacturing, transporting and selling drugs as well as using their authority or position combined with violence and coercion. Furthermore, it also seems that for the crime they have been prosecuted and found guilty, they can receive harsher sentence than a person guilty of the same crime but not being a civil servant.[26]

### 6.1. Market type

Through the analyses of the relevant documents regarding drug trafficking routes regarding Taiwan, we can conclude that Taiwan is an importer, an exporter but also a transit country when it comes to illicit drugs.

According to the data presented at the International Forum on Police Cooperation Combating Transnational Drug Crimes[27], drugs like heroine, ketamine and amphetamine are being imported from countries like Thailand, Cambodia and Vietnam. What is also being imported are the chemicals necessary to produce synthetic drugs (also called new psychoactive substances-NPS), mostly from mainland China. Marijuana has been reported to come mostly from Canada, while cocaine is being imported from Brazil. These findings are consisted with the data in the Table 1, provided by the Taiwanese Ministry of Justice Investigation Bureau[28].

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[26] Article 4 Paragraph 2 states „Offenders of manufacturing, transporting, or selling Category two narcotics are subject to life imprisonment or a minimum seven-year fixed-term imprisonment, and may also be subject to a fine of no more than ten million New Taiwan dollars. "

[27] Huang, Ming-Chao (2019): Taiwan's International Investigation on Drug Trafficking by Air. Presentation paper at the International Forum on Police Cooperation Combating Transnational Drug Crimes

[28] Ministry of Justice, Investigation Bureau (2018): Report on Drug Control and Prevention.

From the regional point of view, it seems that Mainland China and Hong Kong play a significant role regarding export of drugs to Taiwan, especially when it comes to ketamine and precursors who can be misused for the illicit (illegal) production of drugs such as methamphetamines, heroin or cocaine.

From the information available in the Table 1., the main regional sources of drugs in Taiwan are Mainland China, Taiwan itself and Hong Kong. However, it should be noted that the source of drugs can also be just a transfer point to other countries, since the "source" here does not only include the point of origin.

# Table 1: Source Regions of Drug Types[29]

| Source of Drugs | Total | Schedule-1 Drugs | | Schedule – 2 drugs | | | Schedule-3 Drugs | | Schedule-4 Drugs | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Heroin | Total | Marijuana | Amphetamine | Total | Ketamine | Total | Precursor | Ephedrine | Pseudoephedrine | Chloroephedrine | Chloropsedoe phedrine |
| Taiwan | 1,591.9 | 7.3 | 7.3 | 589.8 | 20.8 | 567.8 | 337.9 | 177.4 | 656.9 | 606.7 | 515.9 | 9.2 | 0.2 | 79.5 |
| Mainland China | 2,425.8 | 0.0 | 0.0 | 2.9 | 0.5 | 0.4 | 700.8 | 696.1 | 1,722.0 | 1,722.0 | 719.2 | - | 45.0 | 429.8 |
| Hong Kong | 1,005.8 | - | - | 1.5 | 1.5 | - | 189.6 | 147.2 | 814.7 | 814.7 | - | - | - | 36.7 |
| Thailand | 11.7 | 11.7 | 11.7 | - | - | - | - | - | - | - | - | - | - | - |
| Myanmar | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Others | 790.5 | 5.0 | 1.6 | 743.8 | 33.9 | 687.9 | 41.7 | 41.7 | 0.0 | - | - | - | - | - |
| Unknown | 297.1 | 12.2 | 12.2 | 127.3 | 32.1 | 77.2 | 60.1 | 48.7 | 97.6 | 97.6 | 76.8 | 0.7 | 2.3 | 17.8 |

*Source: Ministry of Justice Investigation Bureau, 2018*

[29] Statistics for regions of drug source are determined according to the packaging discovered by the confiscating authority, the source region of smuggling, or the confession of the offender. "Source of Drugs" can include the transfer point and does not only refer to the place of origin. Regions that could not be determined are listed as "Unknown." "Unknown" includes materials seized from drug criminals during a street deal, those found from holding and using the seized drugs without determinable data of source.
2. The data in this table are computed in kilograms
3. For the correctness of data, the number of drugs seized in cases investigated by several units is not repeated.
4. Non-synthetic drugs, including opium (Schedule-1), opium poppy, cocaine, and marijuana (Schedule-2), are calculated in net weight; amphetamine includes methamphetamine; seeds are excluded from this table.
5. Statistics on Schedule-4 drugs precursors, , are only available since August 11, 2015

### 6.2.Availability of the drugs in Taiwan

The information about the availability of drugs can be obtained through official data from the agencies responsible for addressing the drug problem in a country, mostly police data but also hospitals, and independent research conducted by, for example, universities or investigative journalists. Here we will present data[30] on seized drugs in Taiwan to receive more insight on types of drugs seized which can also be used as a guidance on availability of illicit drugs in Taiwan. Illicit drugs have been presented according to their official status with respect to Taiwanese laws and adjusted for easier insight.

**Table 2. Statistical Table for Seized Narcotics Drugs and Controlled Drugs in Taiwan Schedule 1 (2006 – 2018)**

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Cocaine* | 0.86 | 1,34 | 64,4 | 0,68 | 1,45 | 0.0 | 1,69 | 0.0 | 0.0 | 0,69 | 7,52 | 186,13 | 2,73 |
| Heroin* | 203,48 | 137,66 | 130,51 | 62,420 | 83,60 | 17,83 | 157,94 | 288,25 | 86,73 | 55,71 | 57,46 | 584,84 | 16,55 |
| Morphine | 0.4 | 0.0 | 0.0 | 0.0 | 15.8 | 13.7 | 0.9 | 292.6 | 3.6 | 2.7 | 0.0 | 0.0 | 0.2 |
| Opium | — | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 31.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**\*Values for Cocaine and Heroin are converted in kilograms for easier overview of the table**

[30] Statistical Table for Seized Narcotics Drugs and Controlled Drugs in Taiwan (2006 – 2018.1-4). Taiwan Food and Drug Administration. Retrieved from https://www.fda.gov.tw/eng/siteListContent.aspx?sid=10215&id=27899, October 29th, 2019

**Table 3. Statistical Table for Seized Narcotics Drugs and Controlled Drugs in Taiwan Schedule 2 (2006 – 2018)**

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cannabis* | 28,04 | 22,31 | 13,20 | 61,06 | 21 | 1,59 | 14,35 | 35,74 | 10,73 | 39,93 | 22,573.2 | 499,145.8 | 12,005.2 |
| Gammahydroxybutyric Acid (GHB) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 369.4 | 27.5 | 100.1 | 0.0 | 919.5 | 9.3 |
| Methadone | 570.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.6 | 25.4 | 0.0 |
| (Meth)Amphetamine* | 181,37 | 124,33 | 28,37 | 107,02 | 251,86 | 140,60 | 119,30 | 775,85 | 462,92 | 506,46 | 615,97 | 37,24 | 1,00 |
| Methylamphetamine* | — | — | — | — | — | — | — | — | — | — | — | 48,78 | 3,11 |
| 3,4-methylenedioxy methamphetamine [MDMA]* | 0,25 | 1,8 | 0,89 | 2,01 | 5,88 | 23,94 | 5,75 | 20,38 | 2,27 | 1,0 | 1,11 | 3,46 | 8,63 |
| Opium Poppy | 0.0 | 2,279.9 | 5,748.8 | 0.0 | 1.6 | 187.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Methylenedioxypyrovalerone (MDPV) | — | — | — | — | — | — | — | 2,807.8 | 13.7 | 388.4 | 0.0 | 0.0 | 0.0 |
| Benzoylethanamine (Cathinone) | — | — | — | — | — | — | — | 2,951.6 | 4,008.5 | 0.0 | 0.0 | 0.0 | 42.0 |

*Values for Cannabis, (Meth)Amphetamine, Methylamphetamine and MDMA are converted in kilograms for easier overview of the table

**Table 4. Statistical Table for Seized Narcotics Drugs and Controlled Drugs in Taiwan Schedule 3 (2006 – 2018)**

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flunitrazepam [FM2] | 0.0 | 2.0 | 44.3 | 0.4 | 23.8 | 16.3 | 6.0 | 63.3 | 8.5 | 17.0 | 10.5 | 24.9 | 2.2 |
| **Ketamine\*** | 827,91 | 598,67 | 799,5 | 1186.36 | 2,59 | 1371.85 | 2111.11 | 2393.26 | 3303.19 | 1768.395 | 1188.28 | 1249.136 | 36.20 |
| **Nimetazepam (Erimin)\*** | 216,654.5 | 205,699.0 | 1,157.7 | 15,262.3 | 24,106.7 | 11,964.8 | 116,044.7 | 10,703.1 | 879.2 | 3,835.7 | 10,374.8 | 20,156.4 | 85,869.4 |
| Phenazepam | | | | | | | | 0.0 | 3,038.8 | 1,809.2 | 0.0 | 166.3 | 1.3 |
| 3,4-methylenedioxy methcathinone | — | — | — | — | — | — | — | 16,391.1 | 1,353.0 | 1,995.4 | 167.2 | 94.3 | 0.4 |
| Mephedrone(4-MMC) | — | — | — | — | — | — | — | 0.0 | 2,108.7 | 143.9 | 62.7 | 1,365.6 | 474.1 |
| XLR-11 | — | — | — | — | — | — | — | 0.0 | 29,289.4 | 0.1 | 0.0 | 0.0 | 0.0 |

**\*Values for Ketamine and Nimetazepam are converted in kilograms for easier overview of the table**

**Table 5. Statistical Table for Seized Narcotics Drugs and Controlled Drugs in Taiwan Schedule 4 (2006 – 2018)**

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diazepam (Valium®) | 3,638.0 | 372.2 | 0.0 | 62.9 | 428.2 | 5.6 | 0.0 | 14.6 | 66.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Hydroxylimine HCl* | — | 0.0 | 289.20 | 305.84 | 123.23 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 788.8163 | 772.76 |
| Methylephedrine | 3.8 | 492.3 | 975.8 | 1,554.9 | 1,956.7 | 4,916.1 | 5,220.9 | 591.1 | 2,452.0 | 8.6 | 0.0 | 0.0 | 0.0 |
| Phenylpropanolamine | — | — | 0.0 | 1,004.5 | 0.0 | 291,471.5 | 36,616.0 | 0.0 | 588.6 | 256.4 | 2.1 | 6,299.9 | 0.0 |
| Pseudoephedrine* | 0.0 | 7,471.9 | 489,574.4 | 70,798.3 | 240,062.9 | 329,256.4 | 35,636.4 | 4,272.0 | 13,005.3 | 448,991.2 | 17.7 | 24,483.3 | 1,218.6 |
| Chloropseudoephedrine* | | | | — | — | — | — | — | — | — | — | 2,365,316.9 | 429,845.4 |
| Chloroephedrine* | | | | — | — | — | — | — | — | — | — | 138,968.5 | 44,983.8 |
| Tramadol | 1,641.0 | 8,258.1 | 0.0 | 42.5 | 0.0 | 2,307.7 | 46.6 | 177.6 | 47.5 | 0.0 | 0.0 | 56.4 | 0.0 |

The information about the seized drugs in Taiwan is available for the period of 2006 to 2018 which is of a high value since it can be used in gaining more insight for the demand side of the illicit drug market. For the Schedule 1 drugs, we can see that the cocaine and heroin are the most seized drugs based on the quantity.

For Schedule 2 drugs, (Meth)Amphetamine is the most seized drug which is in accordance with the information from the Table 1. The other drugs seized in significant quantities were methylamphetamine and 3,4-methylenedioxy methamphetamine (MDMA), also known as "ecstasy" or "Molly".

As for the schedule 3 drugs, ketamine is the most seized drug, followed by Nimetazepam (or Erimine) and from 2013 3,4- methylenedioxymethcathinone which is also known as a so called "designer drug". So far, we can see that Taiwan's main drug problem is the high amount amphetamines available on the market. Also, the so called "designer drugs" or NPS have also started appearing on the illicit drug, which means that Taiwan's drug market also follows the global drug market scene. The information from the

Table 4 show that pseudoephedrine, chloropseudoephedrine and chloroephedrine were the most seized drugs, even though the latter two were put on the list of drugs only in 2017. Chloropseudoephedrine is a contaminant produced during the illicit manufacture of methamphetamine when pseudoephedrine or ephedrine are used as precursors. It has been reported to be present in varying levels in clandestinely synthesized methamphetamine and has been observed in some seized forensic samples.

Taking into account these data under the presumption that the "source of drugs" from the Table 1 in majority represents the point of origin from which illicit drugs are imported to Taiwan, the illicit drug market in Taiwan is predominately marked by amphetamines and ketamine, followed by heroin, cannabis, and Nimetazepam. Furthermore, the Table 4 data shows that precursors used for producing illicit drugs are also very much present in the market indicating the presence of illicit laboratories in Taiwan, Mainland China and Hong Kong.

Information about where the drugs were seized and by which agency are also available from the annually published Report on Drug Control and Prevention (RDCP) issued by the Investigation Bureau, Ministry of Justice, Republic of China. According to the available data for the year 2018., Taipei customs with 49 cases of drug seizure was the agency with the most cases of drug seizures. After that, Kaoshiung customs with 12 cases, Keelung customs follows with 10 cases, and Taichung customs with 4 cases (RDCP, 2018:141-144).

The same document provides more information about the source of origins of certain drugs. According to RDCP (2018:145), here are the main sources for certain types of drugs:

- Heroin – Thailand and Malaysia
- Methamphetamine – Taiwan
- Marijuana – Taiwan, Canada and United States of America
- Ketamine: Taiwan and Mainland China
- Nimetazepam: Taiwan

This data shows that Taiwan is not only a transit and destination country, but also a country of origin, especially for the illicit drugs that represent a major problem in Taiwan, namely methamphetamine and ketamine, which can be an indicator for the existence of illegal laboratories in Taiwan. RDCP report (RDCP, 2018:134) indicates that Taiwanese law enforcement agencies have raided 20 drug laboratories, including 4 methamphetamine laboratories, 4 marijuana laboratories, 3 dream coffee drug laboratories, 3 ketamine laboratories, 1 nimetazepam (Erinim) laboratory, 2 ephedrine laboratories, 1

chloropseudoephedrine laboratory, and 2 nitrazepam laboratories. Compared with 2017, the number of drug cases decreased slightly, while the number of seizures and drug laboratories (by 9) increased significantly. This conclusion can be further backed up by the information on the smuggling methods (RDCP, 2018:148). In 61,11% of cases, postal packages were the main method of smuggling drugs into Taiwan, domestic manufacturing was the main method in 12,96% cases, and a maritime container was in 11.11% cases a preferred method.

## 6.3. Prevalence and incidence of illegal drug use

Between 1990 and 2002, results of various studies that used drug urine test on arrested individuals in Taiwan showed that amphetamines and opiates were the major illicit drugs available and consumed in Taiwan (Shu-Fen, Jui and Weng-Ing, 2013)[31]. In particular, the results showed more positives for amphetamines than opiate ones (Lua et al., 2002[32]; Liu et al, 2005[33]). Furthermore, Liu et al. (2005), found out that in 2002 there were less cases of 3,4-methylenedioxy-Nmethamphetamine (further in text MDMA) and ketamine abuse than amphetamines and opiates. The results also showed that the MDMA and ketamine users were younger than the amphetamine and opiate users.

Shu-Fen, Jui and Weng-Ing (2013) conducted a study using the Analytic Laboratory Drug Abuse Report System (ALDARS). The data from ALDARS comprised of information on the urine tests of drug abusers and drug seizures. The samples were collected from the persons arrested for possessing and/or consuming illicit drugs, totalling in approximately 738500 urine samples and around 370100 non-urine cases. The results of the study showed that the top identified drugs abused included methamphetamine, heroin, ketamine, and MDMA in both urine and non-urine samples. While the results showed a descending trend of heroin usage, they also showed and emerging rise in ketamine abuse, along with a steady abuse of MDMA (Shu-Fen, Jui and Weng-Ing, 2013:393). Also known as the "club drug", it was a popular drug among population younger than 29 years of age, used predominately in night clubs and Karaoke bars. Furthermore, the same study reported an emerging threat from the so called "designer drugs" or nowadays mostly known NPS. In particular, the study showed that the estimated number of

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[31] Shu-Fen L., Jui, H., and Wen-Ing T. (2013): The trend of drug abuse in Taiwan during the years 1999 to 2011. Journal of food and drug analysis 21. 390-396

[32] Lua, A. C., Lin, B. F., Tseng, Y. T., Chen, T. H., Chen, T. C. and Chiang, C. K. 2002. Drugs of abuse pattern in Taiwan. Journal of Food and Drug Analysis, 10, 69-74.

[33] Liu, C., Jih-Heng, L., Wen-Ing, T., and Jui, H. (2005): Drug Use and Profile of Individuals Arrested on Drug-related Charges in Taiwan. Journal of Food and Drug Analysis, 13, 2, 101-106

seizure cases involving emerging drugs increased from two in 2004 to 977 in 2011 (Shu-Fen, Jui and Weng-Ing, 2013:393-394). Most abused "designer drugs" at that time were phenylalkylamines, synthetic cannabinoids, piperazines and tryptamines.

A similar study was conducted by Jui, Jii-Jun and Wen-Ing (2014)[34] about drug abuse reported by medical institutions in Taiwan from 2002 to 2011. Data were retrieved from the database of the Taiwan Surveillance System of Drug Abuse and Addiction Treatment (SSDAAT) from 2002 to 2011, and 147,660 cases reported by medical institutions in Taiwan were reviewed. The result showed that top abused drugs reported by medical institutions were heroin, methamphetamine, benzodiazepines, ketamine, zolpidem, and 3,4-methylenedioxy-N-methylamphetamine (MDMA).

Ling-Yi et al, (2016)[35] compared illegal drug use patterns in Taiwan and Korea from 2006 to 2014. The results showed that methamphetamine, heroin and ketamine were still the top abused drugs in Taiwan. The emergence of the NPS has also been recorded in previous research and this research also noted that most abused NPS's in Taiwan in the above-mentioned period were synthetic cathinones and XLR-11.

## 6.4. Characteristics of drug users and drug related crime

Since illicit drug markets are always connected with various criminal acts, the data about certain aspects of criminal cases connected with drugs are always a valuable source of data. In case of Taiwan, there are a substantial amount of data available, however, because of the space, only the most important data will be presented.

Before going into details regarding available data on offenders involved with cases connected to illicit drugs, it is important to define categories of offenders as recognized by the Taiwanese law. There are four categories of the offenders:

1. An adult offender -- refers to the offender who is of age 24 or more.

2. An adolescent offender (young adult) -- refers to the offender who is of age 18 - 24.

3. A juvenile offender -- refers to the offender who is of age 12 - 17.

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[34] Jui H., Jii-Jun L., Wen-Ing T. (2014): Analysis of drug abuse data reported by medical institutions in Taiwan from 2002 to 2011. Journal of Food and Drug Analysis, 22, 169-177

[35] Ling-Yi F., Wen-Jing, Y., Wei-Ting, C., Eunyoung H., Heesun, C., and Jih-Heng, L. (2016): Comparison of illegal drug use pattern in Taiwan and Korea from 2006 to 2014. Substance Abuse Treatment, Prevention, and Policy, 11:34. DOI 10.1186/s13011-016-0078-x

4. A child offender -- refers to the offender who is of age less than 12.

**Graph 1: Schedule One Narcotics Offenders by Age Group[36]**



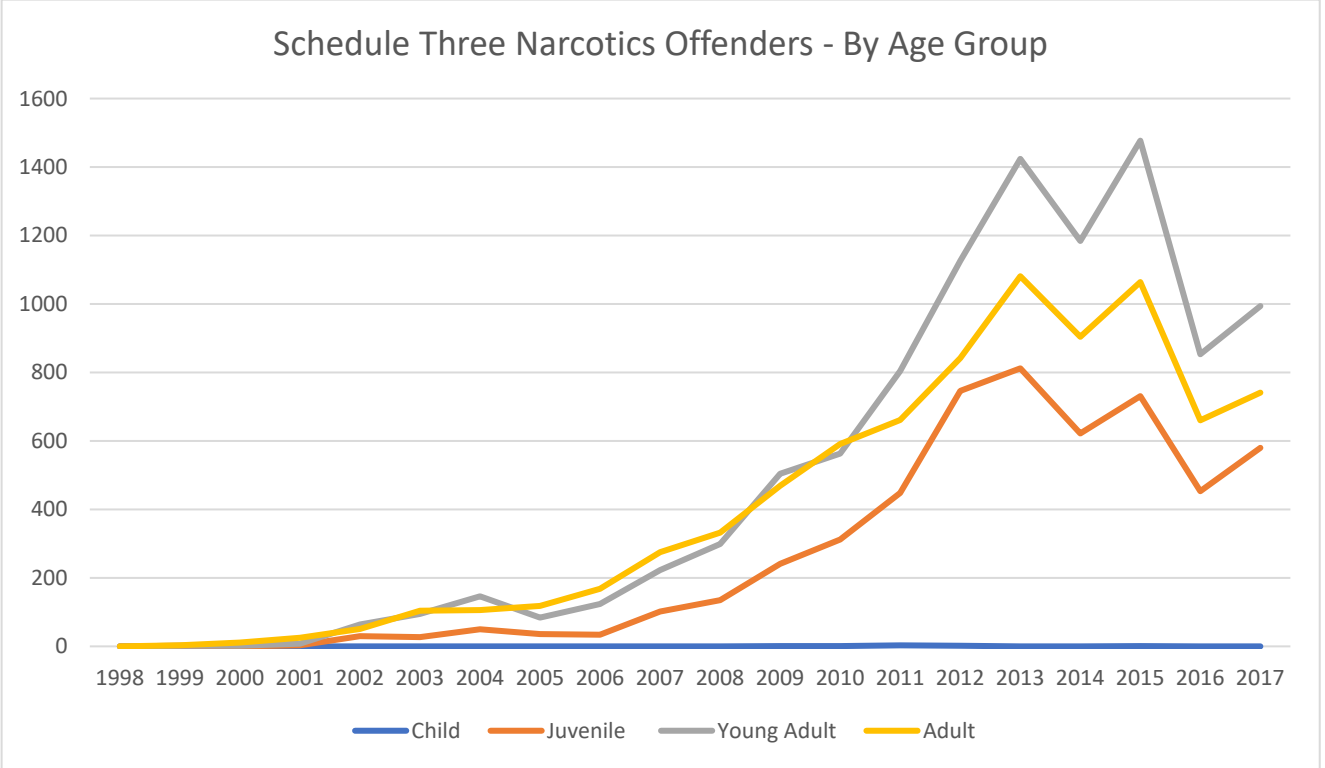Schedule One Narcotics Offenders - Age Group
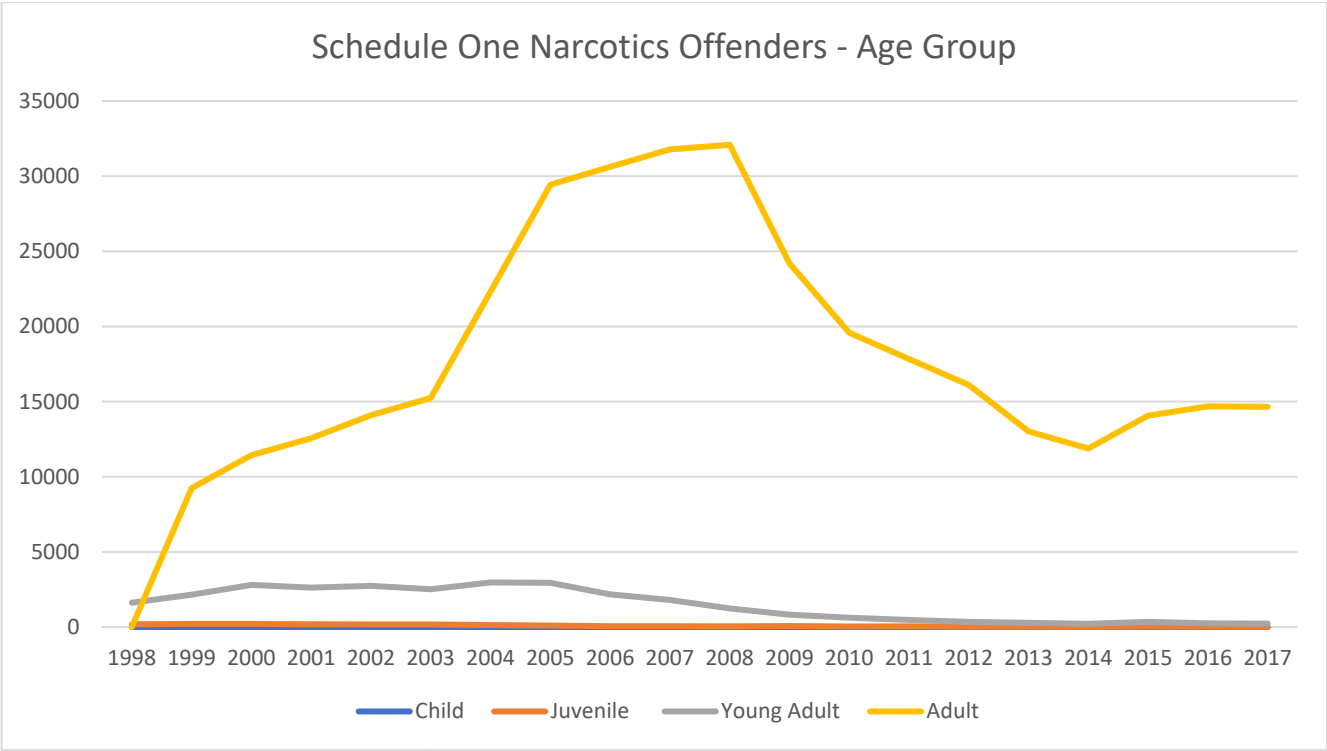
[36] Ministry Of The Interior, National Police Agency (2018): Yearly Statistics of Police Administration Republic of China
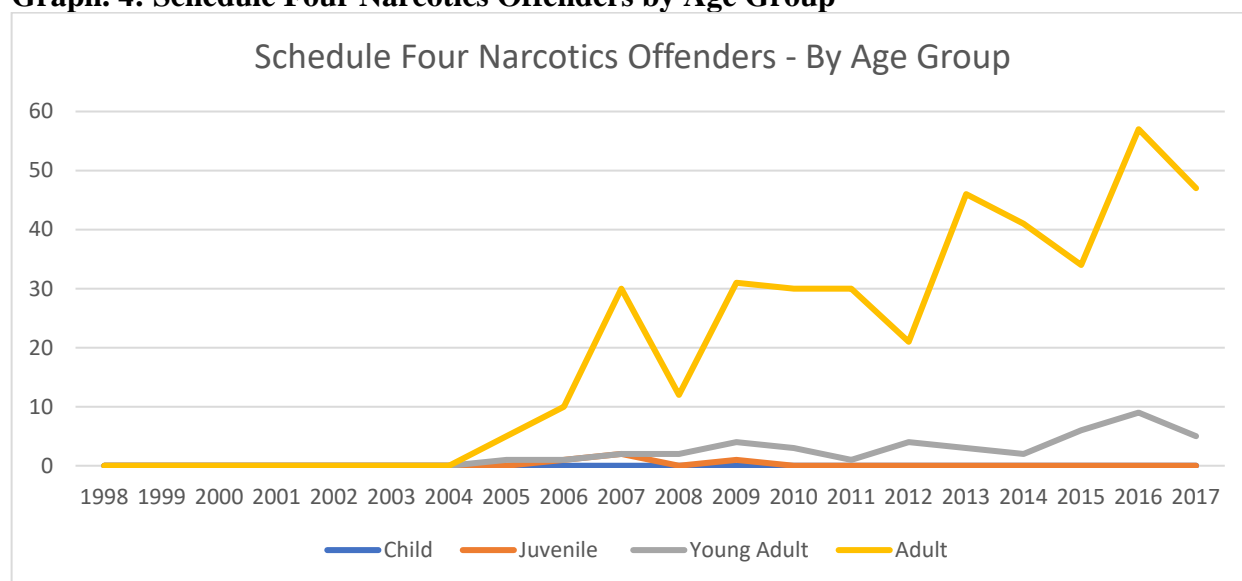
**Graph.2:  Category Two Narcotics Offenders by Age Group**



Schedule Two Narcotics Offenders - By Age Group
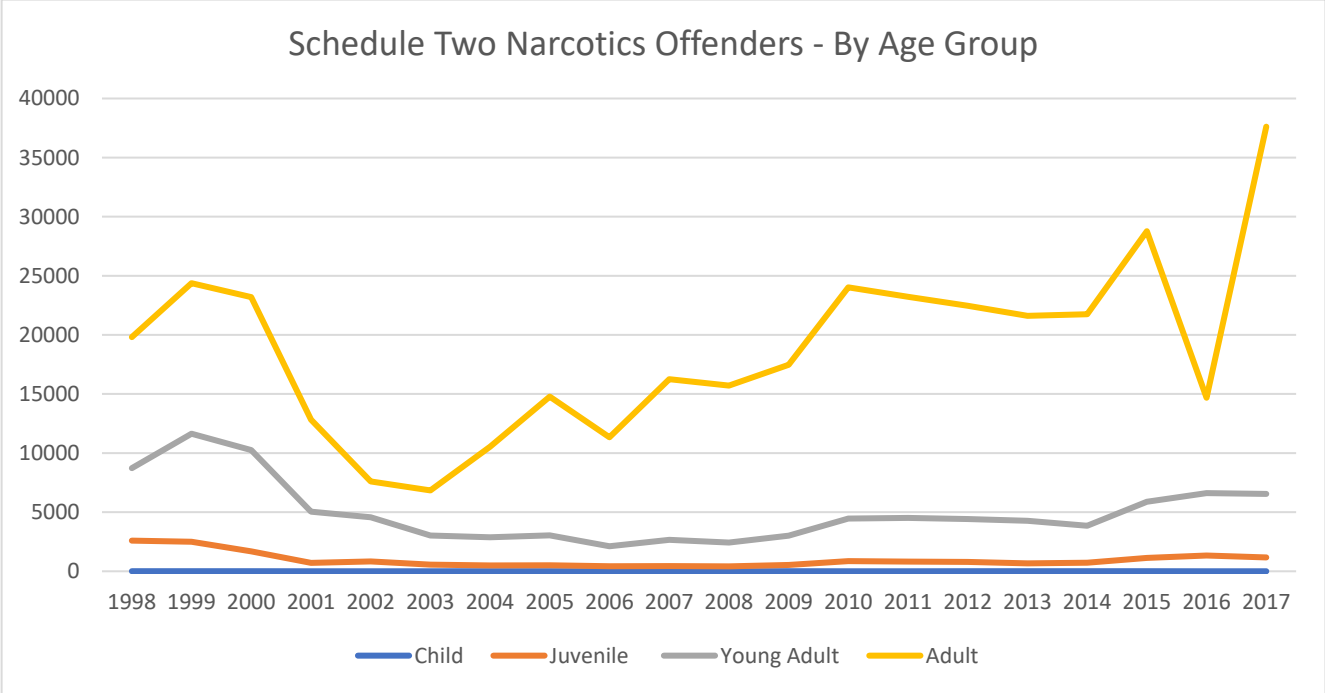
**Graph 3. Schedule Three Narcotics Offenders by Age Group**



Schedule Three Narcotics Offenders - By Age Group

**Graph. 4: Schedule Four Narcotics Offenders by Age Group**



Schedule Four Narcotics Offenders - By Age Group

From the available data in the graphs 1-4 we can see that the most offenders in the Schedule 1 category were adults. The same group of offenders were also the dominant group for Schedule 2 and 4 drug categories. As for the Schedule 3 category, the dominant offender group were persons within the "young adult" category, or the "adolescent offender", meaning persons aged 18-24.

From the information available in the Table 3., in the Schedule 3 drugs are drugs such as ketamine, which is recognized as the major problem in Taiwan. Since this drug is also one of the know "club drugs", cheaper and more affordable, than methamphetamine, it is not a surprise that this type of drug is very popular within the 18-24 age group. Furthermore, the data also shows that amphetamines and ketamine are still very popular within the juvenile group, while cocaine and heroin are popular with the adult population.

One of the first official document that contains data regarding drug related crimes in Taiwan is the Taiwanese Police Book[37] () that contains data about criminal cases known to the police, cases cleared[38] by the police and the number of offenders for all four drug schedules starting from 1998 to 2017.[39] and as such is the most valuable source of data.

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[37] Yearly Statistics of Police Administration, Republic of China, National Police Agency, Ministry of Interior
[38] The terms "cases cleared" in the Police Yearbook means that the police have identified all the persons connected to the known cases.
[39] Table 4. Cases Known to the Police, Cases Cleared by the Police and Offenders, pp.84

For the Schedule 1 drugs, the data shows that in 1998 there were 5082 cases known to the police, 5082 cases cleared by the police and 10522 offenders connected with those cases. As for the Schedule 2 drugs for the same year, 17771 known cases, 17771 cases cleared by the police and 31136 offenders connected to those cases. There are no data available for the Schedule 3 and Schedule 4 drugs for the 1998.

For the Schedule 1 drugs, the data shows that starting from the 1998 cases and offenders connected to these drugs were steadily rising to its peak in 2008, when the cases know to the police rose to 33785, with the identical number of cases cleared. The number of the offenders connected to these cases was 33738. From that year the numbers started to steadily fall to 13905 known cases, the same amount of cleared cases and 14905 offenders.

The data from the same source regarding Schedule 2 narcotics shows a constant rise in numbers of case known to the police, case cleared and the number of offenders. In 1998, there were 17771 known cases, as well as cases cleared with 31136 offenders. The number for the 2017 shows that there were 42501 cases known to the police, 42501 cases cleared, and 45334 offenders connected to these cases. The data for Schedule 3 and Schedule 4 Narcotics also shows steady rising in number, although the numbers are much lower when comparing them to Schedule 1 and Schedule narcotics.

**Table 6. Statistics on the Number of People Convicted of Drug Offenses**

| Item / Year | Total | Schedule-1 Drugs | Schedule-2 Drugs | Schedule-3 Drugs | Manufacturing, Deals and Trafficking | | | Use | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Number of People | Schedule-1 Drugs | Schedule-2 Drugs | Number of People | Schedule-1 Drugs | Schedule-2 Drugs |
| 2014 | 34,672 | 11,038 | 21,203 | 2,388 | 4,421 | 1,199 | 1,943 | 27,199 | 9,254 | 17,945 |
| 2015 | 35,960 | 10,907 | 23,043 | 1,973 | 3,540 | 928 | 1,629 | 29,484 | 9,410 | 20,074 |
| 2016 | 40,625 | 11,717 | 26,924 | 1,961 | 3,292 | 855 | 1,555 | 33,972 | 10,245 | 23,727 |
| 2017 | 43,281 | 11,942 | 29,943 | 1,369 | 3,419 | 859 | 1,931 | 36,535 | 10,358 | 26,177 |
| 2018 | 44,541 | 11,914 | 31,145 | 1,430 | 4,187 | 1,008 | 2,241 | 36,930 | 10,163 | 26,767 |

*Source: Investigation Bureau, Ministry of Justice*

From the table 6 we can see that the total number of persons prosecuted and found guilty in cases regarding drugs rose from 34,672 in the year 2014 to 44,541 in the year of 2018, which represents a significant increase. Furthermore, most of the convictions related to the Schedule 2 drugs in which most of the increase in numbers can be observed. Regarding the type of the offence, the highest number of convictions was for the use of Schedule 2 drugs. What can also be observed is that most convictions refer to the drug use, predominantly Schedule 2 drugs. This information is in accordant with the fact that amphetamines possess a serious issue in Taiwan since they are a Schedule 2 drug.

Amongst other data available on the drug crimes issues in Taiwan, there is also available data on foreigners involved in crimes against NHPA. From the data presented on the Graph 5., the number of cases and persons regarding acts against NHPA has been on a steady rise since 2006. From 2013., the number of foreign persons involved in these cases rose from around 400 up to almost 1200 in 2017.

**Graph 5:      Foreign Offenders – Cases Against Narcotics Hazard Prevention Act**[40]
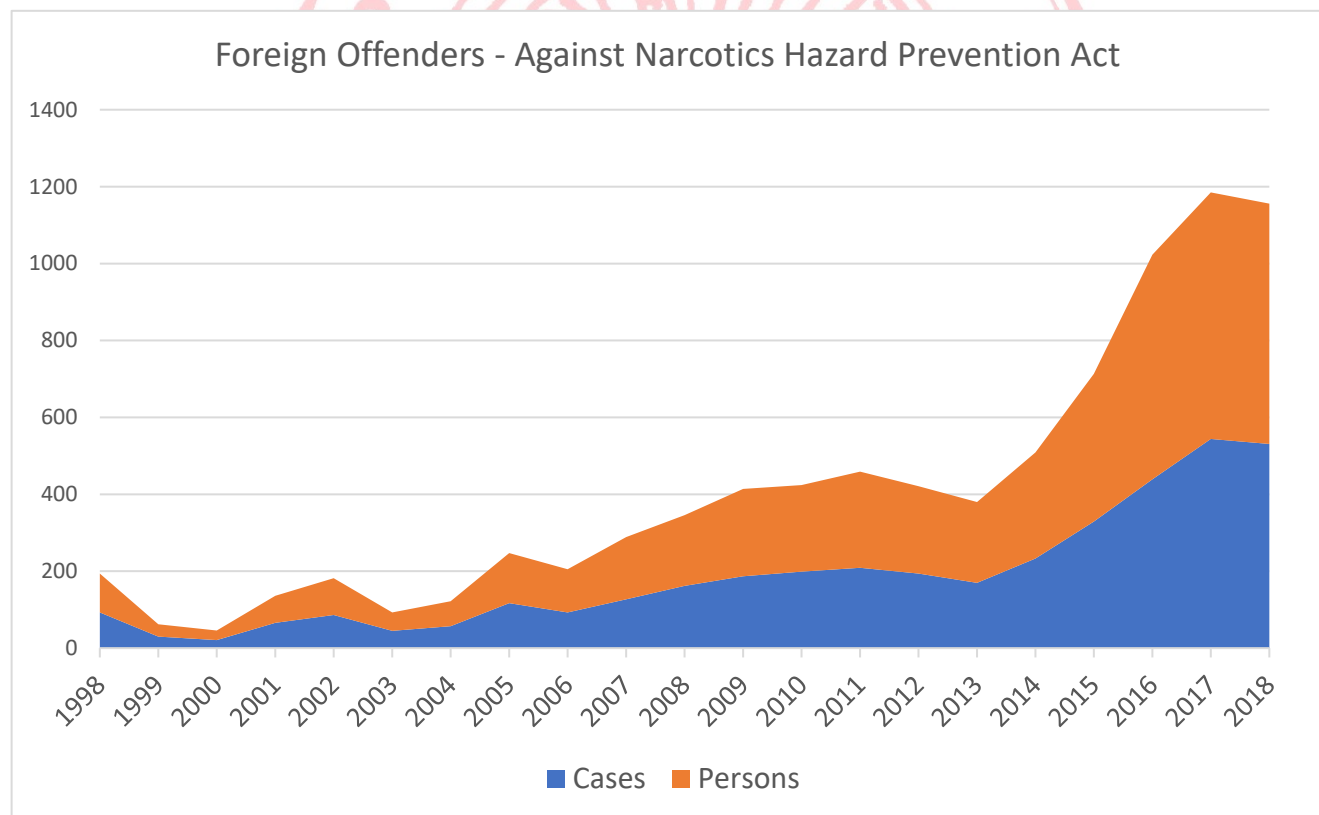
[40] Ministry Of The Interior, National Police Agency (2018): Yearly Statistics of Police Administration Republic of China

The statement from the Taiwan High Prosecutors Office[41] also revealed that more foreign nationals, mainly migrant workers, have become involved in drug-related crimes in Taiwan. In most cases they were arrested for smuggling illegal drugs into Taiwan or taking deliveries of medicines containing banned substances mailed from their home countries. Furthermore, in 2012, 41 foreign nationals were detained for manufacturing, selling or transporting illicit drugs in Taiwan. That number grew to 179 and 189 in 2017 and 2018, respectively, and during the first five months of the year 2019, 82 foreign nationals were arrested for violations related to illicit drugs, mainly amphetamine or marijuana. In 2012, 288 foreigners were detained for the use of Schedule 1 or Schedule 2 drugs, with the number rising to 891 in 2017. During the first five months of the year 2019, 445 were arrested for taking such drugs. From 2014 to May 2019, 1,705 people from Thailand and 1,501 from Vietnam were detained for drug use, followed by 634 from Indonesia, 221 from the Philippines, 213 from China, and 184 from the United States, according to a statement provided by the prosecutor's office.

The number of growing cases and foreigners involved in acts against NHPA can be also viewed from the fact that Taiwan is becoming a popular tourist destination, with number of people visiting, but also deciding to stay, rising every year. From the Taiwanese Tourism Bureau, MOTC[42], by looking at the top 12 international visitors in Taiwan for all purposes, grand total numbers were 8,016,280 in 2013 and 11,066,707 in 2018. Since the number of visitors is growing every year, it is important for the Taiwanese government to take measures to further enhance the cooperation with law enforcement agencies from the countries from who the most visitors come from and from who the most number of persons are involved in cases against NHPA in order to be more effective and efficient in combating international drug trafficking and drug abuse.

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[41] http://focustaiwan.tw/news/asoc/201907310015.aspx - retrieved on November 22nd, 2019
[42] https://admin.taiwan.net.tw/English/ - retrieved on November 22nd, 2019

**Table 7. Statistics on Drug Case Conclusions**

| Type / Year | Total | Indictment | | | | | Deferred Prosecution | Non-prosecutorial disposition | Rehabilitation | Others |
| | | Total | | Schedule-1 Drugs | Schedule-2 Drugs | Schedule-3 Drugs | | | | |
| | | Number of Cases | Use | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2014 | 65,075 | 37,779 | 28,496 | 13,728 | 21,350 | 2,654 | 2,655 | 13,608 | 907 | 10,126 |
| 2015 | 73,391 | 42,364 | 33,215 | 14,669 | 25,304 | 2,345 | 2,873 | 15,760 | 1,032 | 11,362 |
| 2016 | 89,860 | 50,179 | 39,902 | 16,135 | 31,958 | 2,006 | 3,864 | 18,647 | 1,147 | 16,023 |
| 2017 | 96,688 | 51,020 | 39,904 | 15,699 | 33,471 | 1,767 | 8,713 | 19,766 | 1,115 | 16,074 |
| 2018 | 95,890 | 53,356 | 41,032 | 16,239 | 34,817 | 2,216 | 9,245 | 17,663 | 861 | 14,765 |

*Source: Investigation Bureau, Ministry of Justice*

As for the concrete sentences, from the table 7 we can see that most of the sentences were prison sentences in connection with Schedule 2 drugs, more precisely for using the drugs from the Schedule 2 group. Furthermore, the data also shows that after the indictment, a non-prosecutorial disposition has the second most pronounced court decision.[43] However, that information could be valuable in order to gain more insight in the sentencing practice of persons that committed crimes against drugs in any form recognized by the Taiwanese government. What can also be noticed is the very small number of persons sent to rehabilitation. When comparing these data with the data available on drug offenders in the prison system (table 8), it can be noticed that only a small proportion of persons are included in the "rehabilitation" process.

Although it is not explained what "rehabilitation" means, it might refer to the official drug treatment since there is an official law that regulates the treatment of persons convicted under the NHPA act, called Act of Execution of Drug Abuser Treatment (AEDAT).[44] One of the possible explanations for this can

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[43] More information about the prosecutorial system in the Republic of China can be found here: https://www.slc.moj.gov.tw/293754/293755/293757/362035/post. Retrieved on September, 19th, 2019.
[44] https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=C0010023. Retrieved on November 19th, 2019

be found in a recent study made by Pei-Chuan et. all (2017)[45]. This study was conducted to identify factors associated with the decision of judges to sentence defendants who abuse substances to mandatory treatment and to compare the difference of referral rates before and after the Penal Code revision. Of the 3,163 offenders with substance-related charges, only a small proportion of persons with substance use disorders (12.8–13.3%) were referred for mandatory treatment. However, same authors could not find an explanation for this.

**Table 8. Statistical Information on the Overview of Drug Offenders in Prison**

| Item / Year | Number of Inmates | Inmates | | | | | New Inmates | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Manufacturing, Dealing and Trafficking | Percentage | Use | Percentage | Total | Schedule-1 Drugs | Schedule-2 Drugs | Manufacturing, Dealing and Trafficking | Use | Others |
| 2014 | 57,633 | 26,683 | 15,661 | 58.7% | 9,808 | 36.8% | 9,681 | 3,913 | 4,868 | 2,063 | 7,083 | 535 |
| 2015 | 56,948 | 27,007 | 16,238 | 60.1% | 9,628 | 35.7% | 9,740 | 3,760 | 5,117 | 1,907 | 7,271 | 562 |
| 2016 | 56,066 | 27,745 | 16,251 | 58.6% | 10,272 | 37.0% | 10,933 | 3,930 | 6,244 | 1,674 | 8,619 | 640 |
| 2017 | 56,560 | 28,320 | 16,270 | 57.5% | 10,706 | 37.8% | 11,699 | 3,924 | 7,079 | 1,616 | 9,320 | 763 |
| 2018 | 58,059 | 28,808 | 17,089 | 59.3% | 10,296 | 35.7% | 10,948 | 3,407 | 6,768 | 1,674 | 8,413 | 861 |

*Source: Investigation Bureau, Ministry of Justice*

The data from the table above shows that out of the total number of Taiwanese prison population from 2014 to 2018 were persons convicted for crimes related to drugs which shows the seriousness of the problem with drugs in Taiwan. Furthermore, around 60% of prisoners from 2014 to 2018 were in prisons for acts connected to manufacturing, dealing and trafficking, while around 37% of prisoners were there

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[45] Pei-Chuan, W., Yu-Ching, C., Hui-Wen Y.,, San-Yuan H., Li-Hsiang C.,, Yu-Chen K., Hsin-An C. and Nian-Sheng T. (2017):Offenders With Substance Abuse Who Receive Mandatory Psychiatric Treatment. The Journal of the American Academy of Psychiatry and the Law, 45, 316–324.

because of drug use. Regarding occupation, most suspects were in the industry sector followed by the commerce sector. The available data showed that most of the suspects regarding Schedule 2 and Schedule 3 drugs were unemployed or with unknown status, with most suspects being connected to Schedule 2 drugs.

As for the sociodemographic data of persons involved in drug cases, there are data available for the suspects in drug cases solved by the Investigation Bureau of the Ministry of Justice. According to data from 2015 to 2018, for all the Schedules the suspects were predominately males, with exception for Schedule 4 drugs in 2016. As for the age, for the same period, most suspects were in the age group between 30 and 39, following by the age group from 20 to 29. Information about their education status show us that most of the suspect had senior (vocational) high school education, followed by the persons with junior high school level and persons with college education or above. These data are consistent with some of the research conducted in Taiwan regarding characteristics of drug abusers (eg., Jui, Jii-Jun, and Wen-Ing, 2016; Kun-Chia et all., 2015[46]; Shu-Chuan et all.[47], 2016).

The major route of administration for heroin was injection non-needle sharing, followed by smoking and injection-needle sharing. Regarding methamphetamine, most cases involved inhaling and the second most common route was injection non-needle sharing. As for ketamine, snorting was the main route, oral was the second, and smoking was the third. Oral was the major route for both MDMA and benzodiazepines (Jui, Jii-Jun and Weng-In, 2016).

Information about recidivism rates of the persons involved in drug crimes can also be helpful in creating a picture of the illegal drug market, more specifically regarding types of crime committed. As it was already presented in this paper, majority of offences related to drugs were for drug abuse. Information about recidivism rates in Taiwan show that there is an issue about treatment of drug abusers that affects recidivism rates and call for further research and concrete actions.

A study by Shu-Chuan et all. (2016) about recidivism among male subjects incarcerated for illicit drug use showed that out of 794 subjects, 539 (or 67.9%) were repeat offenders during the following 5 years

[46]Kun-Chia C., Tsung-Hsueh, L., Kuan-Ying, L., Jing-Shiang, H., Ching-Ming, C., Jung-Der, W., (2015): Estimation of life expectancy and the expected years of life lostamong heroin users in the era of opioid substitution treatment (OST)in Taiwan. Drug and Alcohol Dependence, 153, 152–158.

[47] Shu-Chuan, C. Shaw-Ji, C., Hsiao-Ju, S., Hung-Yu, C., and Wei, J. C. (2016): Heroin Use among Youths Incarcerated for Illicit Drug Use: Psychosocial Environment, Substance Use History, Psychiatric Comorbidity, and Route of Administration. The American Journal on Addictions, 15, 233–241.

after the treatment. Their recidivism occurred primarily within the first 2 years after being released into the community. Furthermore, the same study showed that recidivism rate was significantly higher for heroin users than for methamphetamine users. Factors associated with recidivism rate included being under 30 years of age, having previous criminal record and having a positive urine analyses test for illicit drugs upon entering the treatment.

A similar study by Tzu-Ching et all. (2007)[48] showed that, while distinguished results have been shown from drug enforcement and anti-drug campaign strategies, the existing drug abstention treatment model in Taiwan proved to be not very successful with the recidivism rate being over 70 percent.

These studies revealed that treatment effectiveness in Taiwan seems to be inadequate. Shu-Chuan et all (2006) reported that treatment in the detention centres, where most drug users undergo mandatory detoxification and risk assessment, was clearly inadequate. Moreover, the same authors reported that the treatment model used in the centres was not validated and that there was a shortage of professionals in mental health.

Similar conclusion was given by Pei-Chuan et. all (2017) in their study of offenders with substance abuse who received mandatory psychiatric treatment. Their study revealed the lack of studies on the relationship between substance abusers, their criminal-responsibility indictments and the real benefits of their treatment. Furthermore, the same authors stated that there were no nationwide studies about recidivism in jails, with one study about a detoxification program for illicit drugs, with mostly offenders who have engaged in heroin and methamphetamine abuse in detention centres, finding that 67.9 percent (539 of 794) were repeat offenders during the five years after detoxification. Following the information about low referral rates to rehabilitation, Pei-Chuan et all. (2017) also noticed that that despite the revised Penal Code, the referral rates for mandatory treatment have not yet changed, meaning they remain very low. Furthermore, the databank lacks input from the judicial system, and there is no information regarding waiting time for each mandatory treatment program and no follow-up information regarding the treatment's effect, especially in situations where the offenders are sent to mandatory treatment programs.

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[48] Tzu-Ching, C., Yu-Jhen, H., and Fu-Cun, L ., (2007).A Study on Factors Affecting the Abstention of Drug Abuse in Private Rehabilitation Institutes in Taiwan — Operation Dawn Taiwan as an Example. Flinders Journal of Law Reform, 10, 737-758

## 6.5. Conclusion and recommendations

Researching illegal drug markets has always been a challenging work since, as stated in the introduction part of this report, there are still some issues that create obstacles in getting more insight in the illegal drug market scene. The problems start almost at the beginning since there are still some issues regarding the definition of an illegal drug market. Furthermore, there is a lack of information on the structure and distribution process of the said markets in different countries, as well as data on how those markets are influenced and in what way they react given certain changes. (Natrajan and Hough, 2000).

Republic of China, Taiwan, also has issues in this area since there is no comprehensive research that would give a clear picture on the illegal drug market scene. However, that does not mean that there are no data available at all that can be used in order to gain insight in some particularities of the illegal drug market in Taiwan. Most of the data than can be obtained and were used in this report came from the official documents issued by Taiwanese Ministry of Justice and Ministry of Interior. This comes as no surprise since those agencies are required by laws to collect various data which makes them useful for comparative reasons. What was also helpful was the fact that these documents are available in English and, in some cases, with additional explanations that are helpful in making sense of the data regarding shaping the picture of the illegal drug market.

However, what lacks here are the information about the dynamics of the illegal drug market in Taiwan. Available reports mention that members of the organized crime are involved in the illegal drug market, however, no data in what way, how they operate and how drugs are distributed and sold locally are available. There is also no data on how the members of organized crime in Taiwan recruit their sellers nor there is officially available information on drug prices.

Furthermore, a certain number of academic papers published in various publications, domestic and foreign, were available with presenting data such as trends in illegal drug abuse in Taiwan, result of the effectiveness of substitution treatment in Taiwan and characteristics of users of certain drugs. However, when taking into consideration the limitations of those studies (cross-sectional studies, small amount participants, self-reported studies), the results must be taken with caution. Apart from this, there are no studies that explore the causal factors in changing trends in drug related problems and crime in Taiwan. Furthermore, there is a lack of studies that addresses reasons why certain drugs are so popular within certain age groups. When discussing this with members of law enforcement agencies and scholars in Taiwan, possible explanations were offered, however, these can only be viewed as personal opinions,

even though they can be used as an argument to some extent. This presents a serious issue in illegal drug market research since this kind of data can explain shifts in trends regarding drug use and much more.

Lastly, one issue that has emerged during this research and that was mentioned in some domestic published work was the fact that recidivism rate regarding drug crimes in Taiwan is substantially high (Shu-Chuan et all, 2006). This can be explained partially with the fact that the referral rate to rehabilitation programs was also very low. However, some studies in Taiwan pointed out that there is no official evaluation of the available rehabilitation programs in Taiwan. Furthermore, there are no studies that explore their efficiency in connection with the recidivism rate. Other than general information, there are also no documents explaining what kind of rehabilitation programs are available for persons with drug abuse issues. Since drug use in Taiwan is a criminal act, most of the offences are for the drug use, however, there are no studies about the secondary crime related to drugs.

Given all the available data related to this research, there are some recommendations for future research in order to increase the effectiveness of prevention measures regarding drug abuse and related criminal acts in Taiwan:

1.  More research should be conducted in order to gain insight on the structure and distribution processes if the illegal drug market in Taiwan. Furthermore, more information is needed in order to understand how members of the organized crime operate on the Taiwanese illegal drug market and are there any specifics regarding different regions in Taiwan.

2.  More research should be conducted towards the effectiveness of law enforcement efforts towards different aspects of illegal drug market. Taiwanese law enforcement agencies publish regularly data about drug seizures, however, there is no data on how that affects for instance drug prices and trends. Furthermore, a study of the effectiveness of current rehabilitation programs is needed since the recidivism rate is very high and this obviously has a great impact on it.

3.  There should be more interdisciplinary research focusing on drug users and their reasons for getting involved in the illegal drug market in any way. Not to say that there are no studies like this at all in Taiwan[49], however these studies need to be available in other languages as well in order to be able to compare them with other similar studies. Understanding the reasons why certain age groups consume certain drugs, get involved again in the world of crime or staying out

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[49] http://www.taipeitimes.com/News/taiwan/archives/2019/08/01/2003719719 - retrieved on October 28th, 2019

of it completely plays a key role in understanding the illegal drug market. Perhaps this recommendation is the most important one since it requires collaboration of different professions who can together give more objective and clearer picture of drug problem in Taiwan.

4. Lastly, except for one study, all available data were of quantitative nature when it comes to methodology. Qualitative research has becoming more and more popular but also necessary since information gained through them can be of high value especially when it comes to prevention of drug abuse. Quantitative data can give us a lot information, however qualitative data can give us more understanding of the nature of the problem of drug abuse and explanation of why we have the problem in the way that is currently present.