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Online markets for illicit drugs in Georgia

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Source code for this document is made available via <u>GitHub</u> for replication and further analysis. Data generated for the study may be used with attribution and without prior permission for research and non-commercial purposes.

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List of non-substance acronyms

| Acronym | Description |
|---------|---|
| втс | Bitcoin |
| CIS | Commonwealth of Independent States |
| EMCDDA | European Monitoring Centre for Drugs and Drug Addiction |
| GPS | Global Positioning System |
| NPS | New Psychoactive Substance |
| UNDOC | United Nations Office on Drugs and Crime |
| USD | United States dollar |

Glossary of terms and substances

| Term | Description |
|---------------|---|
| 25i-nBOME | A synthetic hallucinogen and new psychoactive substance. Referred to as bio-LSD in Georgia. |
| Alpha PVP | $\alpha\textsc{-Pyrrolidinopentiophenone}$, a synthetic stimulant of the cathinone class. Also known as bath salts or flakka. |
| Bitcoin | A decentralized, anonymous digital currency. |
| Blotter | A piece of paper soaked in a psychoactive substance, typically for sublingual consumption. |
| Buprenorphine | A synthetic opiate commonly known by the brand name of Subutex. Used in opiate substitution therapy and as a substance of abuse. |
| Covid-19 | The global pandemic of coronavirus disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) |
| Cryptomarket | An online marketplace for the sale of illicit products. Transactions are typically engineered to protect the anonymity of the parties involved. |
| Clear web | The "normal" internet, unmediated through IP anonymization software such as Tor. |
| Drug | A psychoactive substance, specifically those for which possession, manufacture or distribution is controlled in Georgia. |
| Fentanyl | A powerful synthetic opiate linked to numerous fatalities, including the Bassiani nightclub deaths. |
| Listing | A single sale offering, consisting of a text description, photo, price, quantity available, and location. |
| LSD | Lysergic acid diethylamide, a hallucinogen. |

| Term | Description |
|------------------|---|
| MDMA | 3,4-Methylenedioxymethamphetamine, a synthetic empathogen–entactogen |
| | and stimulant. Known as "ecstasy" in tablet form. |
| Mephedrone | A synthetic stimulant and new psychoactive substance. |
| Methadone | A synthetic opiate used in the form of an oral solution for pain relief and in |
| | opiate substitution therapy. Used illicitly in powdered form as an alternative to |
| | heroin and other opiates. |
| New Psychoactive | "substances of abuse [] that are not controlled by [1961 or 1971 UN |
| Substances (NPS) | conventions] but which may pose a public health threat". Often mimics, and is |
| | used as an alternative to, more established substances. |
| Preorder listing | Listings on the Matanga platform registered as available for pre-order and not |
| | currently placed in a hidden location for collection. |
| Quantity | The quantity listed for a given substance. For most substances, quantity is |
| | measured in grams (g). In the case of MDMA tablets, 25i-NBOMe and LSD, |
| | quantity measures the number of tablets or blotters listed. |
| Ready listing | Listings on the Matanga platform registered as placed in a hidden location for |
| | collection. |
| Retail | Small quantities of substances sold for the use of one individual or a small |
| | group of users. |
| Revenue | Estimated value of a transaction or group of transactions. Provided in United |
| | States Dollars (USD) unless otherwise specified. |
| Tor | The Onion Router. Software which enables anonymous web browsing and site |
| | hosting. |
| Transaction | A single recorded sale, regardless of quantity or price. |
| Vendor | A person or group of persons selling illicit substances on a cryptomarket |
| Web scraping | A technique used to systematically extract large quantities of data from a |
| | website. |
| Wholesale | Large quantities of substances, sold for resale. |

Source code and data

Data for replication and further analysis is available online at <u>GitHub</u>.

Executive Summary

This document presents the findings of a six-month study into online markets for illicit drugs in Georgia. It examines Matanga, a cryptomarket platform that facilitates the anonymous sale of drugs in Georgia and countries of the CIS. It finds a diverse and active marketplace with 16 unique substances listed for sale in the country, generating nearly 1.6 million USD in revenue over a 194-day period.

Findings

Activity on the site

- On an average day, over USD 8,000 in revenue is generated by transactions in Georgia. Similarly, on an average day, substances with a value of over USD 35,000 are hidden in locations around the country's major cities of Tbilisi, Batumi, and Kutaisi.
- This level of trade is substantial in international comparison, exceeding monthly cryptomarket revenue for Spain and Belgium combined.
- Average daily revenue halved following the outbreak of Covid-19 in late February 2020, falling from a pre-crisis baseline of around USD 15,000 a day to USD 7,500 over March to August.

Substances

- Most activity relates to cannabis, cocaine and MDMA, with cannabis sales alone comprising around 56 percent of recorded transactions.
- Whilst some listings offer drugs quantities likely intended for resale (notably MDMA tablets and 25i-NBOMe), most are for quantities likely intended for personal use.
- Cocaine accounts for nearly a quarter of revenue and is the second largest substance in terms of transactions. This finding stands in contrast to recent studies which suggest cocaine use in Georgia to be limited.
- The marketplace contained no listings for synthetic cannabis over a six-month period, suggesting availability of non-synthetic cannabis may have undermined demand for a harmful alternative.
- MDMA tablets ("ecstasy") on Matanga are offered at dangerously high dosages.
- Around 12% of the site's Georgian revenue during the period of the study came from the sale of powdered methadone, a powerful synthetic opiate.

CRRC – Georgia August 2020

- New Psychoactive Substances (NPS) feature prominently in the data. The novel psychedelic, 25i-NBOMe, is offered at low cost at retail and wholesale volumes, with one vendor providing listings in quantities up to 10,000 blotters. Individual blotters were found to be being sold at strengths many times what may be considered a safe dose.
- An active market also exists for Alpha-PVP, an unpredictable novel stimulant with dependency potential.

Recommendations

Public health interventions targeting illicit drug use are currently and justifiably orientated towards opiates and opiate substitutes. Greater diversity in the Georgian illicit drug market will however require new approaches to mitigating harms. Specifically:

- Frontline health and social care staff should be equipped to identify, manage and treat harms
 resulting from a broader range of substances: notably NPS, such as 25i-NBOMe and Alpha-PVP,
 but also cocaine and MDMA.
- Awareness campaigns targeting people who use drugs can mitigate against the risk of accidental overdose and other harms. Campaigns should encourage safer modes of administration, and promote drug identification and titration, as well as discouraging the mixing of substances.
- Cannabis users must navigate listings for more dangerous substances to access a product with a
 low harm profile. Allowing for legal avenues for cannabis purchase would remove a substantial
 proportion of the site's user base, and undermine the potential for cannabis users to experiment
 with other substances available on the site.

Introduction

Background

Georgia has a troubled history with drugs, and possesses the second highest per-capita rate of adult injecting use in the world.¹ Accordingly, research and policy on drug use in Georgia has centered on opiates, opiate substitutes, and other injected substances.² In recent years, however, high-profile club and festival deaths suggest changing patterns of substance use and risk.

In May 2018, five young people died in or after attending the Bassiani nightclub. Media reports attributed the deaths to fentanyl overdose, but suggest that the victims believed they had taken the stimulant, mephedrone.³ In a separate incident later in 2018, one festivalgoer died and three were hospitalized after taking an unknown substance at the Echowaves festival in Anaklia.⁴

In the aftermath of the Bassiani incident, a series of police raids on nightclubs in Tbilisi sparked mass protests, drawing international media attention.⁵ Against this backdrop, the country's Constitutional Court declared custodial sentences for the possession of cannabis unconstitutional, effectively decriminalizing use under controlled circumstances.⁶

These events have brought renewed debate around how government should address issues surrounding drug use, with leading civil society actors calling for wide-ranging drug policy reform.⁷ These debates are taking place in a changing environment, with new substances and new markets calling for fresh evidence to feed into policy reform.

¹ UNODC 2019a; Sirbiladze et al. 2017

² Otiashvili et al. 2013; Otiashvili et al. 2010; Otiashvili et al. 2016; Piralishvili et al. 2015; A Beselia et al. 2019

³ Dunbar 2018; Mandaria 2018

⁴ Agenda 2018b

⁵ Demytrie and Ram 2020

⁶ "Georgia 'Tightens Noose' on Cannabis after Constitutional Court Legalises Use" 2018

⁷ Human Rights Watch 2018; Georgian Young Lawyers Association and Human Rights Education and Monitoring Center (EMC) 2020

New Substances

Recent studies show drug use in Georgia to be characterized by changing preferences and increasing diversity in substance use. A 2019 study of young clubgoers finds little appetite for the injected substances historically associated with drug use in Georgia. Instead, the study identifies a preference for cannabis, MDMA and LSD, and experience with new psychoactive substances, such as synthetic cannabinoids and 25i-NBOMe.⁸

New psychoactive substances

New psychoactive substances (NPS) are defined by the UN Office on Drugs and Crime (UNDOC) as "substances of abuse [...] that are not controlled by [1961 or 1971 UN conventions] but which may pose a public health threat". NPS were initially produced to simulate the effects of existing substances with established markets, whilst avoiding legislative controls on products and precursors. In Western markets, such substances were sold openly as "legal highs" before widespread criminalization in the early 2010s. In Georgia, the prefix "bio" is used to describe an NPS alternative to an existing substance, for example "bio marijuana" (or simply "bio") can be used to refer to synthetic cannabis, and "bio-LSD" to refer to 25i-NBOMe.

NPS are often poorly understood by users, policymakers and public health practitioners, increasing the risk of drug harm and presenting obstacles to effective treatment. NPS have been cited by leading Georgian policymakers as "a growing and potential health and security threat", 13 and there is evidence of their increasing prevalence within Georgia. 14 Georgian users in a recent study report a preference for more traditional substances over NPS, and report price and comparative availability as motivating factors in NPS use. 15

⁸ Ada Beselia, Kirtadze, and Otiashvili 2019

⁹ UNODC 2019b

¹⁰ Hillebrand, Olszewski, and Sedefov 2010

¹¹ Amsterdam, Nutt, and Brink 2013

¹² Subeliani et al. 2019; Ada Beselia and Kurcevič 2020

¹³ Ketevan Sarajishvili 2020

¹⁴ Ada Beselia and Kurcevič 2020; Subeliani et al. 2019

¹⁵ Ada Beselia and Kurcevič 2020

New Markets

Over the last decade numerous internet-based platforms for the sale of illicit substances have emerged worldwide. These *cryptomarkets* have been defined in the literature as:

"An online marketplace that hosts multiple sellers or 'vendors', provides participants with anonymity via its location on the hidden web and use of cryptocurrencies for payment, and aggregates and displays customer feedback ratings and comments." ¹⁷

The potential for cryptomarkets as a model for drug sales in Georgia is first noted in a 2015 paper, which highlighted the use of bitcoin and dead-drops in Skype-facilitated drug transactions, and predicted the evolution of online dealing in the country through the cryptomarket model.¹⁸

In the aftermath of the Bassiani incident, Georgian media reported the possibility that drugs consumed by the victims may have been purchased online, with Matanga featuring prominently in coverage.¹⁹ The site has since been the subject of regular discussion in Georgian and international media,²⁰ and at the time of writing, there is no evidence of any other platform operating in the country at the same scale. Despite its profile in Georgia, only one previous study focused on Matanga exists to date, based on a small survey of users of the platform.²¹ The study finds growing interest in cryptomarkets (specifically Matanga) amongst drug users, and reports convenience and safety to be factors attracting users to the platform.

This study also examines Matanga, providing a unique quantitative exploration of the platform's activity. The platform was selected for study due to Matanga's public profile and apparent market share. It is not, however, the country's only venue for online drug transactions. Mobile messaging applications such as Telegram also feature prominently in coverage of drug arrests²² and alongside Viber, Wicker, Facebook and Whatsapp in recent literature.²³ Two smaller, single vendor cryptomarkets ("PartyDoc" and "AUTOSHOP") are also reported to be operating in Georgia.²⁴

¹⁶ Aldridge and Décary-Hétu 2014; Soska and Christin 2015

¹⁷ M. J. Barratt and Aldridge 2016

¹⁸ Tsertsvadze and Khurtsia 2015

¹⁹ Mandaria 2018

²⁰ Agenda 2020; Choa 2020

²¹ Natenadze 2019

²² Agenda 2019b; Agenda 2019a

²³ Ada Beselia and Kurcevič 2020; Ada Beselia, Kirtadze, and Otiashvili 2019

²⁴ Ada Beselia and Kurcevič 2020

Matanga

Matanga operates in Georgia and countries of the CIS, including Russia, Ukraine and Belarus. Its website reports having begun trading in 2014, but omits Georgia from its history. Furthermore, the site does not appear in Georgian media coverage until 2018, suggesting that it may have only been operational in the country for a few years.

Users may access the platform through Tor and clear web websites, and also through a Tor-enabled smartphone application. Payment is typically facilitated by digital currencies, including Bitcoin, allowing buyer and seller to remain anonymous during the transaction. This noted, a small number of non-bitcoin listings were identified. When a payment is made, customers then collect purchases from hidden locations using GPS.²⁵ This mode of order fulfillment differs from the postal service based systems found in western cryptomarkets,²⁶ favoring the dead-drop system used in Russian markets such as Hydra.²⁷

Aims of the study

This document aims to support effective, evidence-based policy and practice to mitigate against drugrelated harms in Georgia. Specifically, it will address the following research questions:

- How much trade is conducted via the Matanga platform?
- What substances are being sold online in Georgia through the Matanga platform in what volumes?
- What actions may be taken to mitigate against risks posed by the substances identified?

²⁵ Agenda 2018a

²⁶ Aldridge and Askew 2017

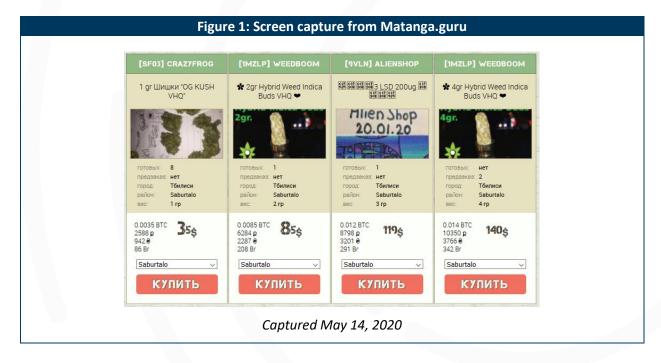
²⁷ Niko Vorobyov 2020

Methodology

The following presents a brief summary of the study methodology. A full description of the study's approaches to data collection and processing can be found in the Methodological Annex (Annex 1), and in the source code on GitHub.²⁸

Data collection

The dataset for the study is derived from web scraping of the Matanga platform, conducted over 194 days between February 5 and August 16, 2020. Data was collected around five times daily, from listings presented for sale in Georgia only. Data collected was inclusive of text description, price, quantity available (stock), vendor, and location. Substances in listings were categorized using a combination of a rules-based algorithm and manual labelling.



²⁸ Goodrich 2020

Data overview

The full dataset comprises over 116 thousand records, each an observation of one of 1,480 unique listings. Analysis was performed only on listings for drugs, excluding 71 listings for work, services, precursors, or one of seven multi-drug "combo" listings.

Table 1: Summary of records collected during scraping

| | Unique records | | | Total Records | | | |
|-----------------|----------------|----------|-------|---------------|---------|---------|--|
| | Non-Drug | Drug All | | Non-Drug Drug | | All | |
| Collection only | 42 | 1,016 | 1,058 | 5,818 | 44,797 | 50,615 | |
| Pre-order only | 28 | 248 | 276 | 9,102 | 39,699 | 48,801 | |
| Both | 1 | 145 | 146 | 1,050 | 15,810 | 16,860 | |
| All | 71 | 1,409 | 1,480 | 15,970 | 100,306 | 116,276 | |

Sales estimations were then performed on the above dataset, reducing the unit of observation from unique listing per scrape to unique listing per day. Sales estimation was performed only on substances listed as ready for collection (i.e. already hidden) discarding pre-order listings (see below). The resulting dataset contains 19,272 listing-day observations, of which 5,243 were non-zero – i.e. containing a day in which a listing was estimated to have resulted in one or more transactions.

Sales estimation

Sales were estimated daily at the listing level through the observation of changes in advertised stock available across multiple daily scrapes. A full description of the sales estimation algorithm may be found in Annex 1 of this document.

Listings on the site are presented as ready for collection (готовых) and for pre-order (предзаказ). Listings advertised as ready for collection are assumed to be already hidden in locations in a given city at the time of advertising. Pre-order listings are used to arrange future transactions. Both types of listing provide a numeric value advertising current stock (see *Figure 1*). Changes in this value are used to estimate sales.

Pre-order listings were excluded from sales estimations as such listings may represent anticipated, rather than actual stock, and because stock may be transferred from preorder to ready listings. Accordingly, preorder listings were considered an unreliable source of data for the study, and transaction estimates provided in this document relate to collection listings only, unless explicitly stated.

Limitations and assumptions

The study provides data from a single online platform, and accordingly estimates in this report should be interpreted to provide a lower bound for the online Georgian drug market, and not as an estimate of total national sales. The study is also constrained by a likely underestimation of sales from within the site.

Relationship with total national sales

Drugs may be sold both online and offline. Western cryptomarkets are believed to represent a very small proportion of total drug sales,²⁹ however there is emerging anecdotal evidence that they may play a more prominent role in countries such as Russia.³⁰ It not possible to determine what proportion of Georgia's drug trade is conducted online: via messenger platforms or cryptomarkets, or through Matanga specifically.

Cryptomarket users in Western countries are predominantly educated and employed,³¹ and given the urban nature and high prices (see *Substances*) of the Matanga platform similar dynamics may be true for this userbase. Online mechanisms may be more popular with users of NPS than those seeking substances with a longer history of human use. A recent qualitative study suggests that NPS may be predominately purchased through cryptomarkets³² with messenger platforms also understood to be a common NPS source.³³

Consequently, certain substances in broad use may be under-represented in the data. Despite substantial, decades-long evidence for the use of opiates and opiate substitutes in Georgia, such substances comprise a small minority of transactions observed (see *Per-substance sales*). Similarly, whilst cannabis represents the majority of activity on the site, other studies suggest that only 5-6% of cannabis users purchase online.³⁴

Accordingly, whilst the data presented in this report provides uniquely granular data, which may offer insights into usage patterns and trends both on and offline, it should be read in the understanding that it leaves much of the Georgian drug market unobserved.

²⁹ Aldridge and Décary-Hétu 2016

³⁰ Niko Vorobyov 2020

³¹ M. J. Barratt, Ferris, and Winstock 2016

³² Ada Beselia and Kurcevič 2020

³³ Ada Beselia, Kirtadze, and Otiashvili 2019

³⁴ Mgebrishvili et al. 2020

Underestimation of sales

Additionally, the mechanism used to estimate sales may not capture the totality of activity from within the site. Sales estimates are based on changes in advertised available stock between successive scrapes. If a vendor has restocked and sold new products between successive observations of a listing, these sales will not feed into transaction estimates. These missed sales may be distributed unevenly throughout the dataset, as the likelihood of missed restock sales decreases with increased scraping frequency, which varied throughout the data collection process (see Annex 1).

Figures presented are for "ready" (collection) listings only, excluding the presale market (see *Sales estimation*, above). This approach may bias estimates towards smaller sales, as larger listings are rarely presented as ready for collection. The extent to which this exclusion underestimates sales is not possible to ascertain with certainty, but exploratory analysis suggests it may be negligible (see Annex 1 for detail).

Covid-19 and seasonality

The study was conducted during the Covid-19 outbreak, which appears to have placed strong downward pressure on activity on the site (see *Market Dynamics*). Moreover, the pre-Covid baseline established prior to the outbreak was for February and March only, which may constitute a lower ebb in sales in line with broader patterns of post-holiday economic activity. Accordingly, this report may have captured market operation which may be smaller in scope than what might be found in a typical year.

Findings

Market Dynamics

The data depicts a busy market, with an estimated USD 1,595,097 in revenue generated in 14,702 transactions across 194 days of monitoring. In international terms, this figure is substantial. Georgia generates around USD 250,000 in cryptomarket drugs sales per month, more than Spain and Belgium combined.³⁵ Moreover, if Georgia was a member of the EU, it would have the Union's fifth highest monthly revenue from cryptomarket drug sales, the highest per capita.

Table 2: Monthly cryptomarket drug sales – European comparison

| Country | Total revenue (USD, millions) | Study duration (months) | Monthly revenue (USD, millions) |
|--------------------------------------|----------------------------------|-------------------------|------------------------------------|
| UK | 33.56 | 11 | 3.05 |
| Germany | 22.37 | 11 | 2.03 |
| Netherlands | 12.26 | 11 | 1.11 |
| France | 4.52 | 11 | 0.41 |
| Georgia† | 1.60 | 6.3 | 0.25 |
| Spain | 1.31 | 11 | 0.12 |
| Belgium | 1.19 | 11 | 0.11 |
| Rest of Europe (inc. Norway, Turkey) | 6.81 | 11 | 0.62 |

Source: Christin and Thomas (2019) excluding (†) CRRC (2020)

Whilst striking, these figures should be interpreted with caution. Crucially, European figures are based on substantially lower unit prices for most drugs³⁶ and may not be an accurate comparison for volume. Further, the figures cited above are drawn from major international platforms which may ignore locally preferred alternative sites. Moreover, EU figures represent country of origin rather than in-country sales.

Nonetheless, this study finds Georgian revenue on Matanga to be substantial when compared to larger European countries. Cryptomarkets in Western countries typically represent only a small part of the overall drug trade. Additionally, despite high levels of injecting drug use in Georgia,³⁷ there is evidence to

³⁵ Christin and Thomas 2019

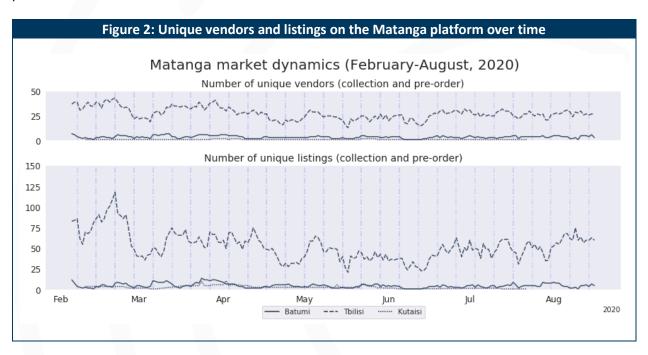
³⁶ For example, in the Christin and Thomas study, a median gram of cocaine is sold at EUR 63 (approximately USD 75). A median gram of cocaine sold on Matanga is over double the price at USD 200.

³⁷ Sirbiladze et al. 2017; UNODC 2019a

suggest that drug use prevalence more generally is substantially lower than most European countries.³⁸ In this context, the above findings would be consistent with Matanga playing a proportionally greater role in the Georgian drug trade than comparable platforms in Europe.

Listings and vendors

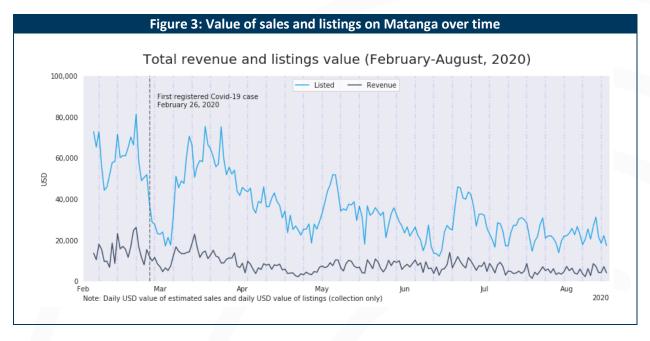
A total of 1,409 unique substance listings were identified, offered by 120 vendors. Listings are concentrated on Tbilisi, which accounts for around 87% of unique listings, followed by Batumi with 10% and Kutaisi with 3%. The remainder of this document reports on the market as a whole for simplicity of presentation.



Activity on the site appears to have experienced a dramatic and sustained fall since the outbreak of the Covid-19 virus in Georgia. Mean unique daily listings and unique daily vendors have dropped by 29 and 25 percent respectively following the first recorded case in Georgia on February 26, 2020.

Substantial declines have been observed in the overall value of products listed and sold (see *Figure 3*). Total daily listing value has fallen from USD 54,887 before the first case to USD 32,476 (around a 40% decline) in the months following. The most substantial decline, however, is observed in average daily sales, which have fallen from USD 14,895 before the crisis to USD 7,455 thereafter, representing a halving of revenue from the site's Georgia listings.

³⁸ UNODC 2019c



Per-substance sales

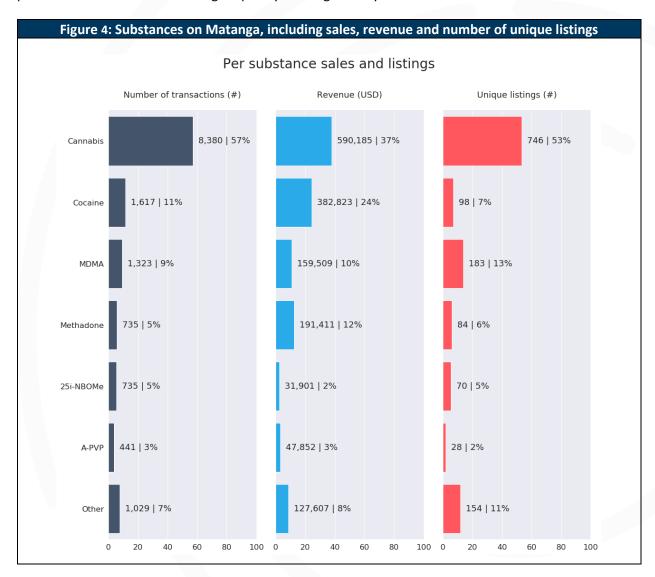
Matanga contains listings for a diverse range of products (see *Figure 4*), with 16 unique substances identified. Alongside better-known substances such as cannabis, cocaine, and MDMA, the data also show substantial sales of powdered methadone, and the NPS 25i-NBOMe and Alpha PVP.

Cannabis listings and transactions account for over half of all transactions and unique listings. Around 94 percent of all transactions, revenue and listings come from six substances: cannabis, cocaine, MDMA, powdered methadone, 25i-NBOMe and Alpha PVP.

Limited sales were estimated for heroin, ketamine and LSD (around 1-2% of transactions each), with lower levels of transactions observed for mephedrone, buprenorphine (Subutex), amphetamines and various pharmaceutical products (less than 1% of transactions). There is one unidentifiable substance in the dataset, listed as "NZT-52 Mind Storm"³⁹ which appears to be being sold in appreciable quantities (USD 39,450 or 2.5% of all revenue) in both Tbilisi and Batumi.

³⁹ Possibly a term for another substance in the data set. It is most frequently listed at USD 190 for one gram, making it most similar in price to cocaine. Listed in Annex 2 as "Unknown".

Notably absent from listings are synthetic cannabinoids ("spice" or "bio-marijuana"), which as recently as 2014 were considered sufficiently prevalent in Georgia to necessitate a standalone public information campaign by the Ministry of Internal Affairs.⁴⁰ It is also of note given Georgia's substantial injecting population and history with opioids, that all opiates and opiate substitutes account for less than ten percent of transactions. No listings explicitly offering fentanyl were observed.



Detailed per-substance breakdowns are available as an annex to this document, see Annex 2.

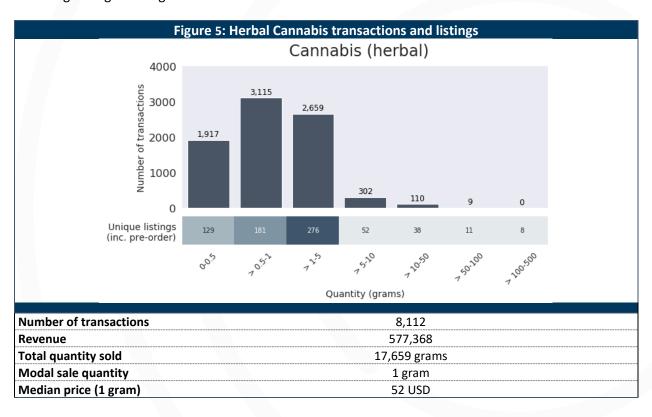
⁴⁰ Ministry of Internal Affairs of Georgia 2014

Substances

This document proceeds to examine the markets for six most frequently sold substances in detail. Specifically, the following subsections will examine activity for cannabis, cocaine, MDMA, opiates (including methadone, heroin, and buprenorphine), 25i-NBOMe, and Alpha-PVP.

Cannabis

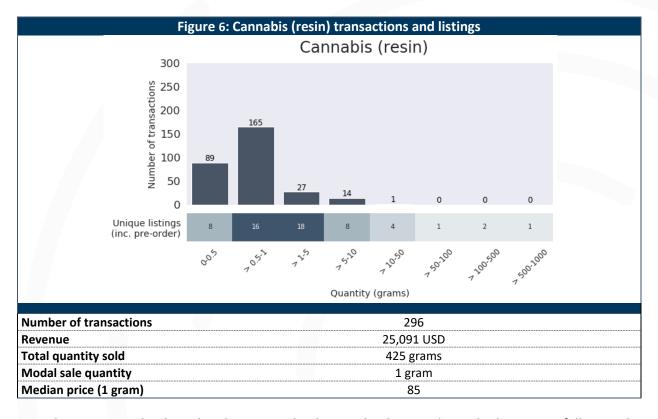
Cannabis accounts for the majority of transactions (57%) on the site, with USD 602,459 spent on cannabis products from 753 unique listings during the study period. That cannabis accounts for such a large proportion of listings is unsurprising, given numerous studies suggesting the substance is the most widely used illegal drug in Georgia.⁴¹



Cannabis is sold both in herbal and resin form, with the herbal form constituting over 95 percent of cannabis revenue by USD value. Cannabis is offered at a range of quantities, from small, personal use-sized amounts (i.e. between 0.5 and 5 grams) to quantities up to 200 grams, likely to include purchases intended for resale.

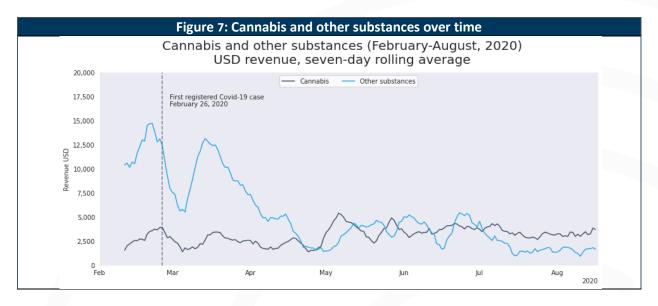
⁴¹ Subeliani et al. 2019; Ada Beselia, Kirtadze, and Otiashvili 2019; Kirtadze, Otiashvili, and Tabatadze 2016

Cannabis resin, whilst a much smaller part of the cannabis market, appears for sale at quantities substantially larger than herbal cannabis, with three listings offering the product between 100 grams and 1 kilogram.



Cannabis appears to be the only substance in the dataset that has not diminished in activity following the outbreak of Covid-19, with USD sales actually increasing over the pre-Covid baseline (see Figure 7). It is not possible to ascertain the drivers behind this apparent growth in demand from the data at hand. This noted, unlike other substances, some cannabis listings explicitly reference domestic or semi-domestic production – e.g. "5gr georgian indica (hight quality)" or "Marihuana [Shishki] [Gali] 100G" – and similarly differentiate for imported goods (e.g. "Amnesia Haze Auto marihuana 5 GR BUDS imported !!").

In this context, an increase in cannabis sales may reflect increases in domestic production, due to seasonal factors or changing demand patterns. Changes in demand may reflect comparative availability, with users of other substances substituting for cannabis as supplies of other substances contract. Shifts in demand may also reflect user preference, with social distancing regulations providing fewer opportunities for socialization and consumption of "party drugs" such as MDMA or cocaine.



Risks and harm reduction

Marketplace gateway effect

A small number of larger offerings notwithstanding, the cannabis market appears to be highly orientated towards quantities likely intended for personal consumption. Accordingly, much of Matanga's Georgian user-base may recreational cannabis users. Research into western markets has identified a "marketplace gateway effect" whereby access to cryptomarkets may lead to diversified drug intake. ⁴² In this context, there is a risk that the marketplace enables cannabis users to experiment with wider range of other substances, some of which are strongly associated with problematic use. Policymakers may note that provision of legal mechanisms for the purchase and consumption of cannabis would distance recreational cannabis users on the platform from other substances.

Synthetic cannabis and cannabis liberalization

The 2018 constitutional court ruling which abolished custodial sentencing for possession of small quantities of cannabis may contribute to the size of the market, given reduced risk for vendors and users. In this context, it is striking that no evidence of synthetic cannabis has been found on the platform during six months of monitoring. This finding adds to emerging evidence that users of synthetic cannabis may have switched to cannabis following the court ruling.⁴³

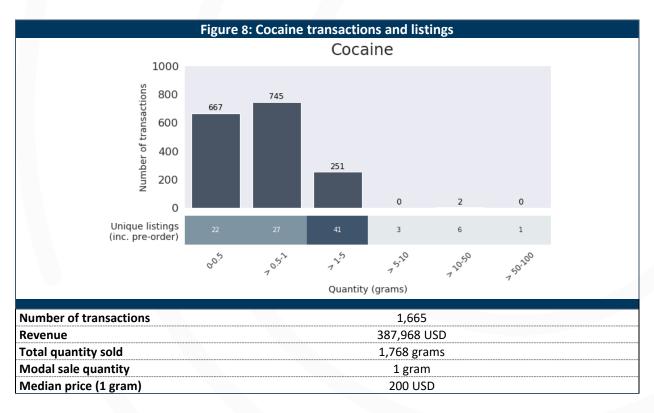
⁴² Aldridge, Stevens, and Barratt 2018; M. Barratt et al. 2016

⁴³ Mgebrishvili et al. 2020

That synthetic cannabinoids may have been displaced by cannabis is in many ways intuitive: like many NPS, synthetic cannabis is more dangerous⁴⁴ and less sought after by users⁴⁵ than the substance it mimics. Use of synthetic cannabis has been broadly linked in the literature to availability and a desire to avoid drug testing.⁴⁶ Prior to liberalization, heavy penalties for cannabis possession and a large-scale drugtesting regime⁴⁷ may have incentivized the use of synthetic alternatives. Users may have used synthetics in a context of cannabis scarcity or in the belief that synthetics may pass drug screening. From a policy perspective, it is noteworthy that cannabis liberalization may have had a demand-side impact on an undesirable substitute.

Cocaine

Estimated cocaine sales exceed USD 387,968, approximately a quarter of all revenue generated on the marketplace over the 6 months of data collection. Whilst its high unit cost accounts for much of its large share in revenue, cocaine is also the second largest category of substance by sales volume with 1,665 transactions recorded.



⁴⁴ Castaneto et al. 2014

⁴⁵ Winstock and Barratt 2013

⁴⁶ Spaderna, Addy, and D'Souza 2013

⁴⁷ Otiashvili et al. 2016

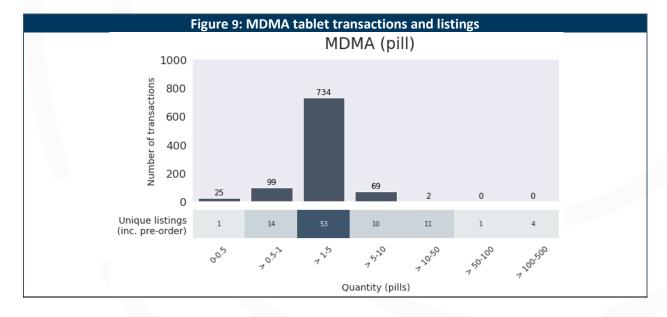
Over 85% of sales are for quantities up to and including 1 gram, suggesting that the vast majority of users are purchasing for their own use or that of a small group. Single larger transactions were observed at 11 and 22 grams.

Risks and harm reduction

The data suggest an active and mature market catering to individual users and potentially a small number of resellers. This finding appears at odds with other recent studies, ⁴⁸ which suggest very limited levels of cocaine use in Georgia. Accordingly, the data may point to a strong emergent trend in drug use, which may not be integrated into planning and practice by professionals working on substance issues. Whilst widely used worldwide, the substance is associated with a range of physiological ⁴⁹ and psychological risks. ⁵⁰ In a context of expanding availability, policy-makers may seek to use specific harm-reduction messaging around cocaine, and ensure healthcare workers are able to identify and respond to problematic use.

MDMA

MDMA sales account for the second largest number of listings by substance but rank fourth in sales volume and revenue. The site's Georgia-based users spent an estimated USD 171,950 on MDMA during the monitoring period, predominately on the tablet form of the drug (almost 70% of MDMA revenue).



⁴⁸ A Beselia et al. 2019; Ada Beselia, Kirtadze, and Otiashvili 2019; Subeliani et al. 2019; Ada Beselia and Kurcevič 2020

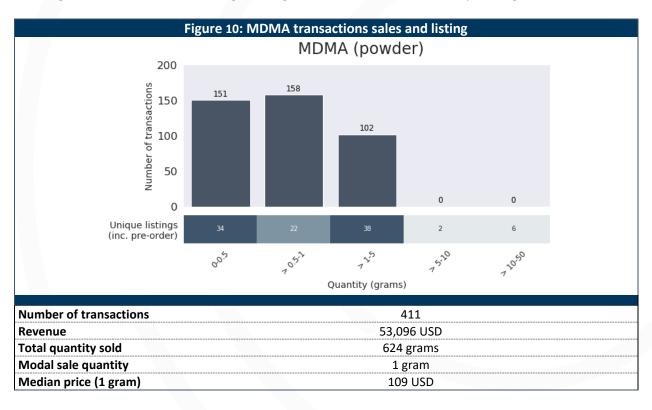
⁴⁹ Kloner R A et al. 1992

⁵⁰ Gawin and Kleber 1986

| Figure 9: MDMA tablet transactions and listings | | | | | |
|---|-------------|--|--|--|--|
| Number of transactions | 929 | | | | |
| Revenue | 118,854 USD | | | | |
| Total quantity sold | 3,233 pills | | | | |
| Modal sale quantity | 2 pills | | | | |
| Median price (2 pills) | 70 USD | | | | |

The plurality of transactions for tablet-form MDMA were for between two and five units, again suggesting the vast majority of purchases are for personal use. This noted, a number of high quantity listings were observed, with packages of up to 500 tablets being offered on the site.

MDMA powder also has a substantial presence on the platform, with over half a kilogram sold throughout the monitoring period. Buyers of MDMA powder also typically purchase in small quantities, either in half or one-gram batches. This noted, larger listings are observed in batches of up to 50 grams.



Risks and harm reduction

Unlike most other substances, the available data allow for the analysis of substance strength – with vendors listing milligram doses for MDMA tablets for just under 70% of listings. Following patterns observed in Europe in recent years,⁵¹ the dosage levels observed are dangerously high, beginning at 223 mg and continuing to as high as 465 mg. "Recreational" doses of MDMA are understood to be within the 50-125 mg range, with most fatalities occurring from the drug found well above 125mg doses.⁵²

Table 3: MDMA pill (ecstasy) strength

| Pill strength (mg) | Unique listings | Revenue (USD) |
|--------------------|-----------------|---------------|
| 223 | 11 | 51,445 |
| 240 | 3 | 0 |
| 260 | 4 | 206 |
| 280 | 4 | 5,261 |
| 300 | 27 | 17,033 |
| 450 | 10 | 22,458 |
| 465 | 5 | 605 |
| Not given | 30 | 21,846 |
| | 94 | 118,854 |

The presence of high-dose MDMA tablets on the Georgian market is concerning given associated risks of serious physical harm. This concern is particularly acute given the large number of MDMA-related transactions in the data, which reinforces other studies which have highlighted a preference for the drug among young Georgian clubgoers.⁵³

The data suggest a large market for MDMA in Georgia. Incidence of fatalities from MDMA usage is relatively low,⁵⁴ and largely linked to environmental factors such as dehydration, hyperthermia or hyponatremia,⁵⁵ or to polydrug use.⁵⁶ These risks are however exacerbated by higher dosage, a particular concern given the strength of tablets offered on Matanga.

⁵¹ EMCDDA 2016

⁵² Kalant 2001

⁵³ Ada Beselia, Kirtadze, and Otiashvili 2019

⁵⁴ Gore 1999

⁵⁵ Hall and Henry 2006

⁵⁶ Schifano et al. 2003

Evidence for MDMA dependence is mixed, with addiction not typically viewed as a risk in most users.⁵⁷ Users may also ingest other, higher-risk substances in the belief that they are taking MDMA either as a result of misidentification or adulteration. Similarly, users – particularly inexperienced users – may also add NPS to their repertoires where MDMA is not available.⁵⁸

These issues notwithstanding, where appropriate harm-reduction strategies are applied, MDMA may be one of the lower-risk substances being sold, particularly given the presence of NPS such as Alpha-PVP and 25i-NBOMe, which may share a similar user base.⁵⁹ Potential harms from MDMA use may be mitigated by informed user behavior. International evidence suggests that abstinence-based messaging is ineffective in reducing risk,⁶⁰ and that deaths may be prevented by promoting titration, encouraging safe levels of water consumption, and discouraging polydrug use.⁶¹

Methadone, Heroin and Buprenorphine

As opiates and opiate substitutes, methadone, heroin, and buprenorphine (Subutex) are discussed together. Of these three substances, powdered methadone comprises the vast majority of activity on the site in Georgia. Methadone is sold predominately as a powder and accounts for nearly seventy percent of opiate transactions and eighty percent of opiate revenue.

Table 4: Opiate and opiate substitute transactions

| Substance | Туре | Transactions | % ⁶² | Revenue (USD) | % | Unique listings | % |
|---------------|--------|--------------|-----------------|---------------|----|-----------------|----|
| Methadone | Powder | 846 | 69 | 198,884 | 80 | 86 | 52 |
| Heroin | | 303 | 25 | 39,649 | 16 | 48 | 29 |
| Buprenorphine | | 69 | 6 | 9,152 | 4 | 30 | 18 |
| Methadone | Syrup | 10 | 1 | 646 | 0 | 2 | 1 |
| | | 1228 | | 248,331 | - | 166 | - |

Methadone in non-injectable syrup form is used clinically to treat opiate dependence. Alongside buprenorphine, methadone syrup is available in Georgia through opiate substitution programs, which are subsidized for low-income and socially vulnerable groups. Given the ready availability of these substances at low or no cost, it is unsurprising their illicit market is small.

⁵⁷ Degenhardt, Bruno, and Topp 2010; Jansen 1999; Kalant 2001; Uosukainen, Tacke, and Winstock 2015

⁵⁸ Moore et al. 2013

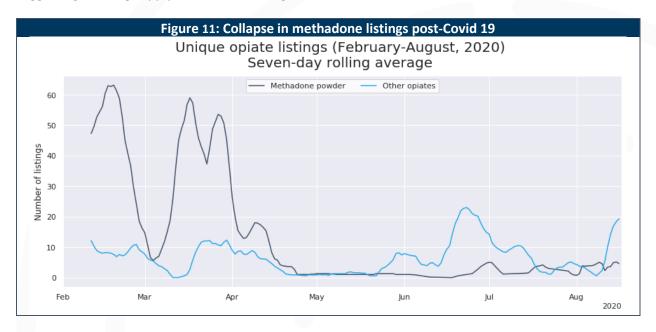
⁵⁹ Moore et al. 2013

⁶⁰ Pan and Bai 2009

⁶¹ Rigg and Sharp 2018

⁶² Percentages expressed as a percentage of all opiates and opiate substitutes.

The injected use of powdered methadone as a substitute for heroin has been documented in the Russian Federation⁶³ and the data suggest a market for the substance in this form in Georgia. Of the larger volume substances found, powdered methadone market appears to have been uniquely affected by the Covid-19 outbreak. The number of packages listed for collection for the substance have virtually disappeared, suggesting a strong supply-side shock (see *Figure 11*).



Risks and harm reduction

Methadone powder is the only substance in the dataset to carry an explicit health warning, with one vendor noting in a listing "new batch, incredibly strong, be careful with dosage."⁶⁴ The presence of powdered methadone in the Georgian drug market should be highly concerning for policy-makers, health practitioners and users. Small quantities of methadone taken by someone without tolerance can easily be fatal, and even experienced users must dose carefully to avoid overdose.⁶⁵ As a white powder, it may also be mistaken for a number of other, less dangerous substances, putting users of other drugs at risk of overdose through accidental ingestion.

Powdered methadone is sold at a wide range of package sizes, ranging from 0.1 grams up to 20 grams. In a similar pattern observed with almost all substances, almost all listings and transactions are at small, personal quantities, with a small number of (pre-order) listings for wholesale quantities. The majority of

⁶³ Heimer et al. 2016

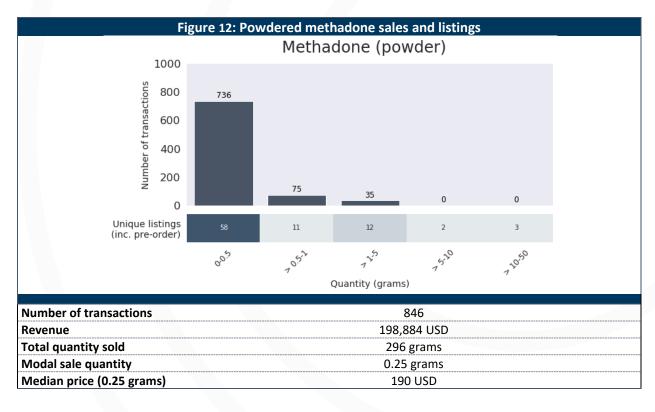
⁶⁴ Original in English.

⁶⁵ White and Irvine 1999

sales are made at 0.25 grams at a price of 190 USD per quarter gram, making it one of the most expensive substances per gram⁶⁶ in the dataset.

Powdered methadone is largely absent from recent research on injected drugs in Georgia,⁶⁷ and these findings may point to an emerging trend in substance use. The rapid decline in supply following the Covid-19 outbreak suggest a fragile supply chain and that a small number of wholesale suppliers may be responsible for much of the trade on the site. This fragility may pose a risk for polydrug users, who may alternate between substances based on availability, experiencing fluctuations in tolerance which increase overdose risk.

The potential emergence of powdered methadone in the Georgian drug market should be monitored closely by policymakers and health practitioners, given the substance's strong potential for problematic use. Harm reduction strategies surrounding opiates and opiate substitutes are the subject of extensive Georgia-specific literature, and accordingly are not examined in detail within this document.⁶⁸



⁶⁶ Excluding substances dosed in micrograms, e.g. LSD or 25i-NBOMe.

⁶⁷ Sirbiladze et al. 2017; A Beselia et al. 2019; Otiashvili et al. 2016; Ada Beselia and Kurcevič 2020

⁶⁸ Otiashvili et al. 2010; Otiashvili et al. 2013; Otiashvili et al. 2016; Piralishvili et al. 2015

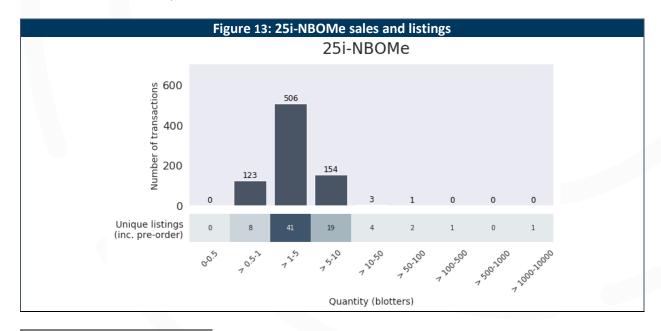
25i-NBOMe

The hallucinogenic NPS 25i-NBOMBe is the fifth largest substance in the dataset by number of transactions, accounting for around 5% of transactions on the site. It is by far the cheapest substance with a median price of one high-dose blotter only USD 20. It also possesses the largest single listing, with one vendor offering three 10,000 blotter packages for preorder, suggesting substantial quantities of the drug are currently available in Georgia

Risks and harm reduction

25i-NBOMe is highly potent, with links to numerous fatalities and hospitalizations. Most concerningly, many fatality reports highlight that the victim had believed that they were taking another substance, often LSD or 2-CB.⁶⁹ In this context, it is alarming that the 25i-NBOMe being sold in Georgia appears to be uncommonly strong. Where dose strength is indicated in the data, it is exclusively 2.5mg. A strong dose is considered to be in the 0.7-1mg range, or 2.5-3.5 times the listed strength.⁷⁰ Such is the strength of this substance, even single blotters contain enough active chemical for four to five "normal" doses.

25i-NBOMe may be taken intentionally or unintentionally by users of LSD, which has a substantially lower harm profile than its NPS alternative. Given its undesirable side-effects, it is unlikely that the substance's popularity in Georgia is a result of user preference but is instead due to substantial levels of supply and the relative absence of a preferred alternative (LSD).



⁶⁹ European Monitoring Centre for Drugs and Drug Addiction 2014; Suzuki et al. 2015; Zawilska, Kacela, and Adamowicz 2020

⁷⁰ Zawilska, Kacela, and Adamowicz 2020

| Figure 13: 25i-NBOMe sales and listings | | | | |
|---|----------------|--|--|--|
| Number of transactions | 787 | | | |
| Revenue | 41,349 USD | | | |
| Total quantity sold | 3,408 blotters | | | |
| Modal sale quantity | 2 blotters | | | |
| Median price (2 blotters) | 20 USD | | | |

There is a clear need for policy action surrounding 25i-NBOMe. Substantial quantities of a high-strength batch of a substance which is both potentially fatal and easily confused for other drugs are found to be in circulation. Healthcare practitioners need to be able to easily identify and treat adverse reactions to 25i-NBOMe.

Harm reduction information surrounding the substance should focus on identification and disambiguation, to ensure users are aware of the difference between 25i-NBOMe and LSD, mitigating against accidental overdose due to misidentification. Campaigns in the UK have included the slogan "If it's bitter, it's a spitter".⁷¹

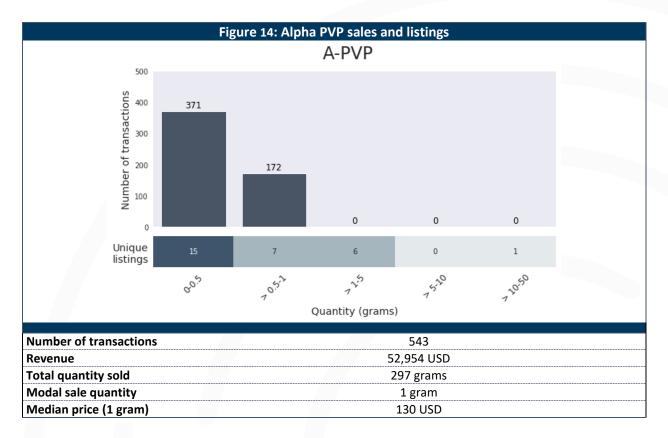
There is evidence that some users are deploying appropriate dosing strategies for 25i-NBOMe, dividing single high-strength blotters into quarters.⁷² This noted, the extent to which such strategies are practiced by all current and potential users is unclear. Given the large quantities of the substance in circulation and noting that failure to dose correctly may be fatal, campaigns should also include messaging on appropriate dosage levels.

Alpha-PVP

The stimulant NPS, Alpha-PVP, sometimes known in the West as "bath salts" or "flakka" is also prominent in the dataset. Despite its short history of human consumption, the substance generated over USD 52,570 in revenue over the monitoring period, in excess of the combined totals for the better-known substances: amphetamine, methamphetamine, LSD and ketamine. The substance is almost exclusively sold in small, personal quantities, with very limited evidence of a wholesale market.

⁷¹ Bristol Drugs Project 2020

⁷² Ada Beselia and Kurcevič 2020



Risks and harm reduction

Alpha-PVP is a poorly understood, potentially fatal NPS which is associated with problematic use and dependency. A 2016 risk assessment by the ECMDDA identified 116 Alpha-PVP linked deaths in eight members states over the 2012-15 period.⁷³ This rate is particularly concerning given comparatively low levels of detection through clinical reports and drug seizures.⁷⁴

As a new substance, use patterns and addiction risk have not been systematically analysed, however the same ECMDDA report found evidence of dependence in animal studies. Anecdotal reports from within Georgia and Russia also suggest concerning potential for problematic use.⁷⁵ It may also be injected, presenting additional health risks related to transmissible blood-borne disease. Research into Alpha-PVP use in Georgia is only recently emerging but suggests the substance may be consumed by users of other NPS.⁷⁶

⁷³ EMCDDA and Europol 2015

⁷⁴ EMCDDA and Europol 2016

⁷⁵ Choa 2020; Iravani 2020

⁷⁶ Ada Beselia and Kurcevič 2020; Subeliani et al. 2019

More generally, there is evidence that stimulant NPS such as Alpha-PVP may be taken by users of more established stimulants.⁷⁷ Given the widespread availability of cocaine and MDMA identified in this study, users of these substances may be appropriate targets for policy interventions seeking to reduce Alpha-PVP consumption and/or associated risks. As a new substance, limited literature exists on specific harm-reduction messaging for Alpha PVP, however stimulant applicable messaging around dose titration, substance identification, substance mixing and injection may apply.

Similarly, increased consumption of Alpha-PVP will provide new challenges for professionals working with people who use drugs. Healthcare workers, psychologists and social workers should be trained to identify and respond to harms resulting from problematic Alpha-PVP use.

⁷⁷ Moore et al. 2013

Conclusions

Scale of activity on the site

This study finds Matanga to be a substantial component of Georgia's drug trade, generating hundreds of thousands of dollars in revenue each month from the sale of illegal substances. On an average day, over USD 8,000 in revenue is generated by transactions in Georgia. Similarly, on an average day, substances with a value of over USD 35,000 are hidden in locations around the country's major cities of Tbilisi, Batumi, and Kutaisi. This level of trade is particularly striking in international comparison, potentially exceeding cryptomarket revenue in most European countries.

Matanga is however only one of many ways in which drugs may be purchased, with alternatives existing both on and offline. The platform is also limited in geographic scope, and more expensive and difficult to use than more traditional methods of drug acquisition. Accordingly, whilst Matanga is likely a proportionally larger component of Georgia's overall drug trade than similar platforms in European countries, it still unlikely to constitute more than a fraction of total sales in the country. Whilst the available data do not allow extrapolation to the country's entire market, the true extent of Georgia's drugs trade is likely to be many times larger than that undertaken through Matanga.

The outbreak of Covid-19 has seen a dramatic decline in activity on the site, with daily revenue halving in the months following Georgia's first case. Factors behind this decline warrant further investigation, but may include supply-side factors, such as shortages brought on by border closures; and demand-side factors, stemming from a decline in social activity and nightlife following the outbreak. Certain categories of substance, notably powdered methadone, have clearly experienced a supply-side shock, disappearing from listings rapidly over the course of a week (see *Figure 11*). Contrary to overall trends, cannabis sales appear to have increased since the crisis began.

Key findings

- On an average day, over USD 8,000 in revenue is generated by transactions in Georgia. Similarly, on an average day, substances with a value of over USD 35,000 are hidden in locations around the country's major cities of Tbilisi, Batumi, and Kutaisi.
- This level of trade is substantial in international comparison, exceeding monthly cryptomarket revenue for Spain and Belgium combined.
- Average daily revenue halved following the outbreak of Covid-19 in late February 2020, falling from a pre-crisis baseline of around USD 15,000 a day to USD 7,500 over March to August.

Substances

Sixteen unique substances were identified for sale on the site, including better-known substances with a longer history of human use, and a range of New Psychoactive Substances (NPS). Despite this variety, the majority of listings and transactions relate to a relatively small subset of drugs. Taken together, six substances – cannabis, cocaine, MDMA, methadone (predominately in powdered form), Alpha-PVP, and 25i-NBOMe – account for just under 95% of all activity.

The vast majority of listings for all substances appear to be in small quantities, most likely intended for personal use or for that of a small group. This noted, some much larger wholesale listings were observed for cannabis, cocaine, MDMA and 25i-NBOMe, with one vendor offering 25i-NBOMe in batches of 10,000 blotters.

Cannabis alone accounts for over half of the transactions and listings found, and over a third of total revenue with users of Matanga spending over half a million US dollars on cannabis in February-August 2020. Cannabis is also the only substance that appears to have grown in availability and activity since the onset of the Covid-19 crisis. The continued availability of cannabis would be consistent with increases in domestic production and with changing patterns of substance use in a context of social distancing. Synthetic cannabis ("bio-marijuana" or "spice") is completely absent from the site, a finding which may support emerging evidence that users of synthetic cannabinoids have switched to cannabis following liberalization of cannabis laws in 2018.⁷⁸

⁷⁸ Mgebrishvili et al. 2020

Following cannabis, cocaine and MDMA taken together account for a further 20% of transactions and listings and over a third of revenue. Cocaine's position as the second most purchased substance is not anticipated by recent literature, which suggests it is used by a small minority of Georgian drug users.⁷⁹ MDMA is available in both powder and tablet form, with dosage levels for tablets often dangerously high. Cocaine and MDMA both present serious risks to health, however these risks are better understood in comparison to the NPS which may also be consumed by cocaine and MDMA users.

Sales of powdered methadone accounted for just 5% of transactions across the full six-month dataset. This share is, however, greatly diminished from earlier in collection and would likely have been much higher if the substance had not largely disappeared from listings in April 2020. Such oscillations in opiate availability have been observed in existing literature⁸⁰ and present serious health risks to users, who may struggle to manage tolerance levels across a wide range of substances and adopt home-made alternatives (e.g. "krokodil") where preferred substances are scarce.

Taken together, the NPS' 25i-NBOMe and Alpha PVP account for around 8% of transactions, 5% of revenue and 7% of listings. Both substances have limited history of human use and have been linked to numerous fatalities. This report presents evidence that substantial quantities of 25i-NBOMe is being sold in high volumes at low cost. Alpha-PVP appears to be available in lower quantities, but is more strongly associated with long-term problematic use, and has the potential to form a dependent user-base.

Key findings

- Most activity relates to cannabis, cocaine and MDMA, with cannabis sales alone comprising around 56 percent of recorded transactions.
- Whilst some listings offer drugs quantities likely intended for resale (notably MDMA tablets and 25i-NBOMe), most are for quantities likely intended for personal use.
- Cocaine, largely unrecognized in recent literature, accounts for nearly a quarter of Georgian revenue.
- The marketplace contained no listings for synthetic cannabis over a six-month period, suggesting
 wide availability of non-synthetic cannabis may have undermined demand for a harmful
 alternative.
- MDMA tablets ("ecstasy") on Matanga are offered at dangerously high dosages.

⁷⁹ A Beselia et al. 2019; Ada Beselia and Kurcevič 2020; Ada Beselia, Kirtadze, and Otiashvili 2019

⁸⁰ Otiashvili et al. 2016; A Beselia et al. 2019

- Around 12% of the site's Georgian revenue during the period of the study came from the sale of powdered methadone, a powerful synthetic opiate.
- New Psychoactive Substances (NPS) feature prominently in the data. The novel psychedelic, 25i-NBOMe, is offered at low cost at retail and wholesale volumes, with one vendor providing listings in quantities up to 10,000 blotters. Individual blotters were found to be being sold at strengths many times what may be considered a safe dose. An active market also exists for Alpha-PVP, an unpredictable novel stimulant with dependency potential.

Recommendations

Most of the substances identified during the study are already subject to strict prohibitions on possession and supply, but nonetheless exhibit vibrant and profitable markets. In this context, policies that seek to eliminate drug use through extending the current framework of prohibition (e.g. through increasing already lengthy prison terms) may do little to constrain use and harms.

Despite strict prohibitive measures, Georgian policymakers have also long recognized the value of harm-reduction as a pillar of drug policy, notably through the endorsement of opiate substitution programs. This report finds increasing diversity in substance availability and changing use profiles, which will require new approaches to harm reduction to prevent serious harm and loss of life among drug users in Georgia.

Each substance identified in the study has a unique harm profile, with users at risk of a range of acute and chronic health problems. Accordingly, frontline health and social care staff should be equipped to identify, manage and treat harms resulting from a broader range of substances: notably NPS, such as 25i-NBOMe and Alpha-PVP, but also cocaine and MDMA.

Health risks can be mitigated through user practices, which may be promoted through targeted awareness campaigns. Government-led campaigns have to date focused predominantly on abstinence-based messaging, which has proven ineffective in reducing use and conveys no actionable information to individuals who do take drugs. Whilst policymakers may not choose to provide explicit backing to such campaigns, informed user behavior has the potential to save lives. Accordingly, strategies that engage third parties or arms-length entities – such as NGOs or universities – may be preferred. Campaigns should

⁸¹ Ministry of Internal Affairs of Georgia 2014

⁸² Pan and Bai 2009

encourage safer modes of administration, promote drug identification and titration, as well as discouraging the mixing of substances.

The majority of activity on the site comes from small cannabis transactions, suggesting much of the site's user-base are recreational cannabis users. The sums of money involved in these transactions are substantial, and likely represent a small fraction of the country's total cannabis trade. Cannabis users must navigate listings for a wide array of substances to access a product with a low harm profile, enabling access to expanded repertoires and increasing exposure to more varied harms. Allowing for legal avenues for cannabis purchase would reduce the potential for cannabis users to experiment with other substances available on the site. Furthermore, the creation of a legal market for cannabis would eliminate a substantial proportion of the site's revenues, undermining profits for criminal enterprise and establishing a new government revenue stream via taxation.

Summary of recommendations

- Frontline health and social care staff should be equipped to identify, manage and treat harms
 resulting from a broader range of substances: notably NPS, such as 25i-NBOMe and Alpha-PVP,
 but also cocaine and MDMA.
- Awareness campaigns targeting people who use drugs can mitigate against the risk of accidental overdose and other harms. Campaigns should encourage safer modes of administration, and promote drug identification and titration, as well as discouraging the mixing of substances.
- Cannabis users must navigate listings for more dangerous substances to access a product with a
 low harm profile. Allowing for legal avenues for cannabis purchase would remove a substantial
 proportion of the site's user base, and undermine the potential for cannabis users to experiment
 with other substances available on the site.

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