Shedding Light on the Darknet

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Agenda

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- Business Use Case
- Methodology
  - Tools
  - Data Sources
  - ETL Process
  - Dimensional Model
- Findings
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- Lessons Learned
- Appendix

Executive Summary

- Analyzed data from darknet market webscrapes and economic metrics in order to better understand internet crime

- Information will supplement existing Law Enforcement intelligence and aid in efficient allocation of LE resources

- Data management and analysis was conducted using open source software

Business Use Case

- Law Enforcement agencies are working to combat cybercrime (online trafficking of contraband, data breaches, identity theft)

- Agencies depend on up-to-date, detailed intelligence in order to efficiently allocate limited resources

- Insights generated from darknet data may assist Law Enforcement with preventing and eliminating cybercrime

Tools

- Amazon Web Services (Relational Database Service) - Hosting
- MySQL (Workbench) – Database Design & Implementation
- Data Cleaning
  - Excel – Data Preprocessing
  - R – Cluster Analysis
- Tableau - Visualizations / Insights

Data Sources

Name	Description	Num. records
Hansa market listings	Market data web scrape of item listings from Hansa market, December 2016	14,773
Valhalla market listings	Market data web scrape of item listings from Valhalla market, October 2016	16,511
Agora market listings	Market data web scrape of item listings from Agora market, 2014-2015	109,621
Country GDP	World Bank and OECD National Accounts data for 2014-2016	264
Country Population	World Bank and OECD National Accounts data files for 2014-2016	264

HANSA

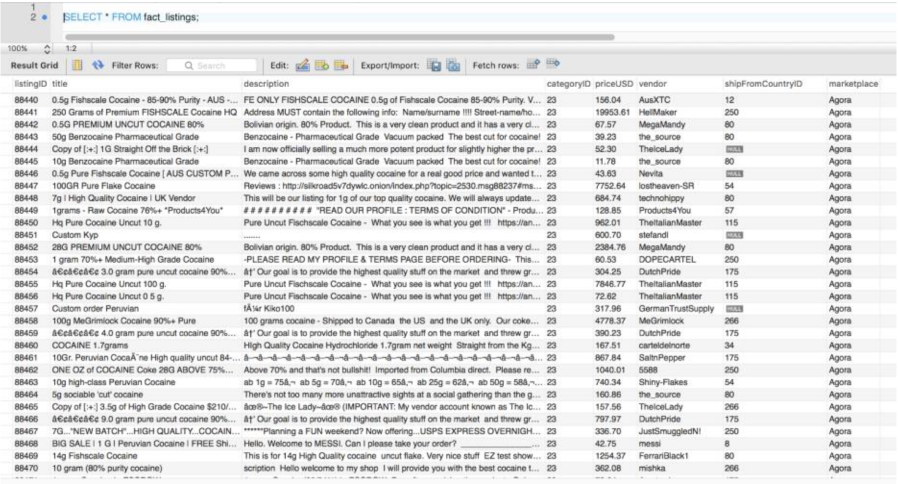
VALHALLAMARKETPLACE

THE WORLD BANK

ETL - fact_listings

Consolidated listing-level data from Agora, Hansa, and Valhalla webscrapes into one fact_listings table

- Dropped columns that were not shared among all subtables
- Created fact_listings.market to track data origin
- Standardized all currencies to USD
- Cleaned fact_listings.shipFromCountry:
    - Clustered related abbreviations and polymorphisms (e.g. “U.S.A.”, “US”, “UnitedStates” = “United States”
    - shipFromCountry = multiple locations or a region were converted to new category “multiple”
    - shipFromCountry = NA or ‘Undeclared’ were converted to blank
- Fact_listings.category: Reduced the number of categories by clustering related ones together



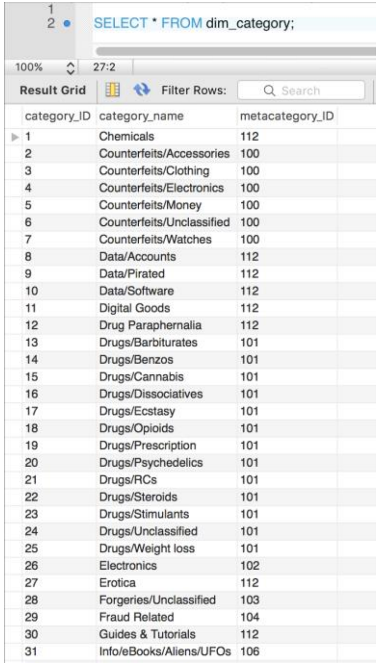
```sql
SELECT * FROM fact_listings;
```

listingID	title	description	categoryID	priceUSD	vendor	shipFromCountryID	marketplace
88440	0.5g Fishscale Cocaine - 85-90% Purity - AUS -...	FE ONLY FISHSCALE COCAINE 0.5g of Fishscale Cocaine 85-90% Purity. V...	23	156.04	AusXTC	12	Agora
88441	250 Grams of Premium FISHSCALE Cocaine HQ	Address MUST contain the following info: Name/surname !!!! Street-name/ho...	23	19953.61	HellMaker	250	Agora
88442	0.5G PREMIUM UNCUT COCAINE 80%	Bolivian origin. 80% Product. This is a very clean product and it has a very cl...	23	67.57	MegaMandy	80	Agora
88443	50g Benzocaine Pharmaceutical Grade	Benzocaine - Pharmaceutical Grade Vacuum packed The best cut for cocaine!	23	39.23	the_source	80	Agora
88444	Copy of [:+:] 1G Straight Off the Brick [:+:]	I am now officially selling a much more potent product for slightly higher the pr...	23	52.30	TheIceLady	NULL	Agora
88445	10g Benzocaine Pharmaceutical Grade	Benzocaine - Pharmaceutical Grade Vacuum packed The best cut for cocaine!	23	11.78	the_source	80	Agora
88446	0.5g Pure Fishscale Cocaine [AUS CUSTOM P...	We came across some high quality cocaine for a real good price and wanted t...	23	43.63	Nevita	NULL	Agora
88447	100GR Pure Flake Cocaine	Reviews : http://silkroad5v7dywlc.onion/index.php?topic=2530.msg88237#ms...	23	7752.64	lostheaven-SR	54	Agora
88448	7g I High Quality Cocaine I UK Vendor	This will be our listing for 1g of our top quality cocaine. We will always update...	23	684.74	technohippy	80	Agora
88449	1grams - Raw Cocaine 76%+ *Products4You*	# # # # # # # # # # "READ OUR PROFILE : TERMS OF CONDITION" - Produ...	23	128.85	Products4You	57	Agora
88450	Hq Pure Cocaine Uncut 10 g.	Pure Uncut Fischscale Cocaine - What you see is what you get !!! https://an...	23	962.01	TheItalianMaster	115	Agora
88451	Custom Kyp	....	23	600.70	stefandl	NULL	Agora
88452	28G PREMIUM UNCUT COCAINE 80%	Bolivian origin. 80% Product. This is a very clean product and it has a very cl...	23	2384.76	MegaMandy	80	Agora
88453	1 gram 70%+ Medium-High Grade Cocaine	-PLEASE READ MY PROFILE & TERMS PAGE BEFORE ORDERING- This...	23	60.53	DOPECARTEL	250	Agora
88454	â€¢â€¢â€¢ 3.0 gram pure uncut cocaine 90%...	â†' Our goal is to provide the highest quality stuff on the market and threw gr...	23	304.25	DutchPride	175	Agora
88455	Hq Pure Cocaine Uncut 100 g.	Pure Uncut Fischscale Cocaine - What you see is what you get !!! https://an...	23	7846.77	TheItalianMaster	115	Agora
88456	Hq Pure Cocaine Uncut 0 5 g.	Pure Uncut Fischscale Cocaine - What you see is what you get !!! https://an...	23	72.62	TheItalianMaster	115	Agora
88457	Custom order Peruvian	fÃ¼r Kiko100	23	317.96	GermanTrustSupply	NULL	Agora
88458	100g MeGrimlock Cocaine 90%+ Pure	100 grams cocaine - Shipped to Canada the US and the UK only. Our coke...	23	4778.37	MeGrimlock	266	Agora
88459	â€¢â€¢â€¢ 4.0 gram pure uncut cocaine 90%...	â†' Our goal is to provide the highest quality stuff on the market and threw gr...	23	390.23	DutchPride	175	Agora
88460	COCAINE 1.7grams	High Quality Cocaine Hydrochloride 1.7gram net weight Straight from the Kg...	23	167.51	carteldelnorte	34	Agora
88461	10Gr. Peruvian CocaÃ¯ne High quality uncut 84-...	â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â-¬â...	23	867.84	SaltnPepper	175	Agora
88462	ONE OZ of COCAINE Coke 28G ABOVE 75%...	Above 70% and that's not bullshit! Imported from Columbia direct. Please re...	23	1040.01	5588	250	Agora
88463	10g high-class Peruvian Cocaine	ab 1g = 75â,¬ ab 5g = 70â,¬ ab 10g = 65â,¬ ab 25g = 62â,¬ ab 50g = 58â,¬...	23	740.34	Shiny-Flakes	54	Agora
88464	5g sociable 'cut' cocaine	There's not too many more unattractive sights at a social gathering than the g...	23	160.86	the_source	80	Agora
88465	Copy of [:+:] 3.5g of High Grade Cocaine $210/...	âœ®~The Ice Lady~âœ® (IMPORTANT: My vendor account known as The Ic...	23	157.56	TheIceLady	266	Agora
88466	â€¢â€¢â€¢ 9.0 gram pure uncut cocaine 90%...	â†' Our goal is to provide the highest quality stuff on the market and threw gr...	23	797.97	DutchPride	175	Agora
88467	7G..."NEW BATCH"...HIGH QUALITY...COCAIN...	******Planning a FUN weekend? Now offering...USPS EXPRESS OVERNIGH...	23	336.70	JustSmuggledN!	250	Agora
88468	BIG SALE I 1 G I Peruvian Cocaine I FREE Shi...	Hello. Welcome to MESSI. Can I please take your order? ________________...	23	42.75	messi	8	Agora
88469	14g Fishscale Cocaine	This is for 14g High Quality cocaine uncut flake. Very nice stuff EZ test show...	23	1254.37	FerrariBlack1	80	Agora
88470	10 gram (80% purity cocaine)	scription Hello welcome to my shop I will provide you with the best cocaine t...	23	362.08	mishka	266	Agora

ETL - dim_categories & dim_metacategories

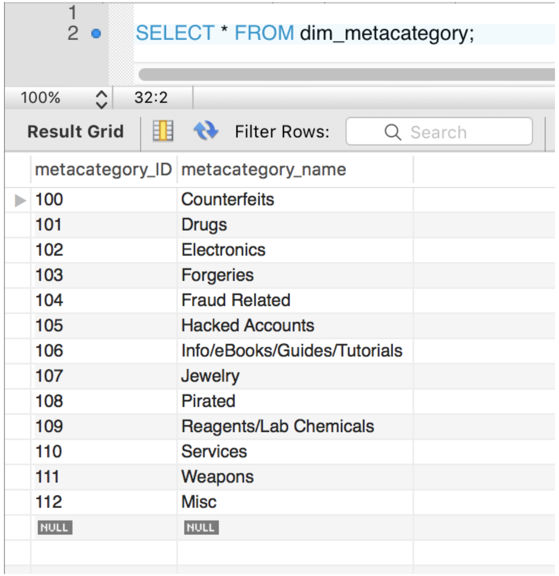
- snowflaked dim_category out of facts table
    - 59 categories

- Created metacategories to further simplify category clusters for ease of future analysis, and snowflaked dim_metacategories out of dim_category
    - 13 metacategories



```
SELECT * FROM dim_category;
```

category_ID	category_name	metacategory_ID
1	Chemicals	112
2	Counterfeits/Accessories	100
3	Counterfeits/Clothing	100
4	Counterfeits/Electronics	100
5	Counterfeits/Money	100
6	Counterfeits/Unclassified	100
7	Counterfeits/Watches	100
8	Data/Accounts	112
9	Data/Pirated	112
10	Data/Software	112
11	Digital Goods	112
12	Drug Paraphernalia	112
13	Drugs/Barbiturates	101
14	Drugs/Benzos	101
15	Drugs/Cannabis	101
16	Drugs/Dissociatives	101
17	Drugs/Ecstasy	101
18	Drugs/Opioids	101
19	Drugs/Prescription	101
20	Drugs/Psychedelics	101
21	Drugs/RCs	101
22	Drugs/Steroids	101
23	Drugs/Stimulants	101
24	Drugs/Unclassified	101
25	Drugs/Weight loss	101
26	Electronics	102
27	Erotica	112
28	Forgeries/Unclassified	103
29	Fraud Related	104
30	Guides & Tutorials	112
31	Info/eBooks/Aliens/UFOs	106

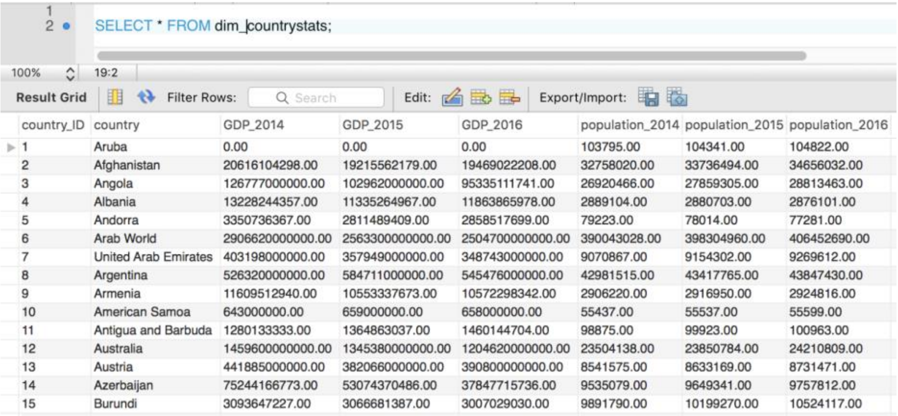


```
SELECT * FROM dim_metacategory;
```

metacategory_ID	metacategory_name
100	Counterfeits
101	Drugs
102	Electronics
103	Forgeries
104	Fraud Related
105	Hacked Accounts
106	Info/eBooks/Guides/Tutorials
107	Jewelry
108	Pirated
109	Reagents/Lab Chemicals
110	Services
111	Weapons
112	Misc
NULL	NULL

ETL - dim_countrystats

- Created dim_countrystats
  - ○ Combined GDP and population data from years 2014-2016 (years of market data scrapes)
  - ○ Standardized country names in fact_listings to be consistent with dim_countrystats naming conventions (e.g. “Russian Federation” rather than “Russia”)

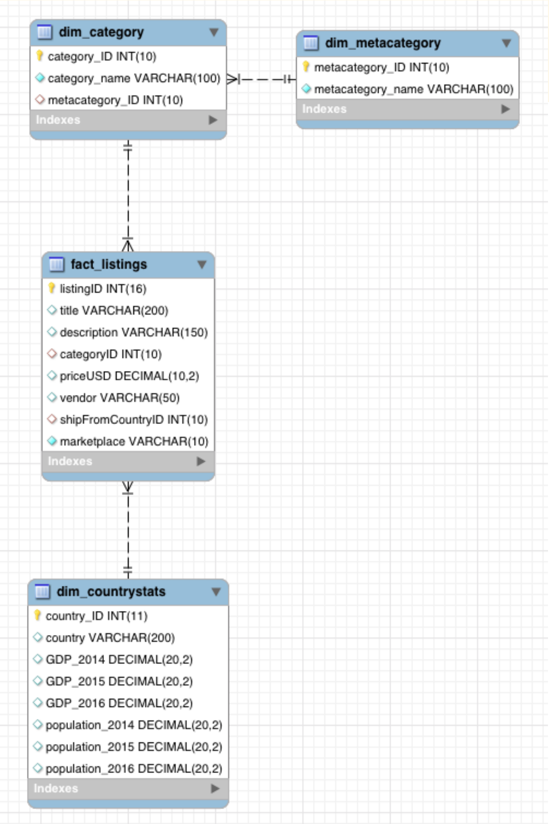


```
SELECT * FROM dim_countrystats;
```

country_ID	country	GDP_2014	GDP_2015	GDP_2016	population_2014	population_2015	population_2016
1	Aruba	0.00	0.00	0.00	103795.00	104341.00	104822.00
2	Afghanistan	20616104298.00	19215562179.00	19469022208.00	32758020.00	33736494.00	34656032.00
3	Angola	126777000000.00	102962000000.00	95335111741.00	26920466.00	27859305.00	28813463.00
4	Albania	13228244357.00	11335264967.00	11863865978.00	2889104.00	2880703.00	2876101.00
5	Andorra	3350736367.00	2811489409.00	2858517699.00	79223.00	78014.00	77281.00
6	Arab World	2906620000000.00	2563300000000.00	2504700000000.00	390043028.00	398304960.00	406452690.00
7	United Arab Emirates	403198000000.00	357949000000.00	348743000000.00	9070867.00	9154302.00	9269612.00
8	Argentina	526320000000.00	584711000000.00	545476000000.00	42981515.00	43417765.00	43847430.00
9	Armenia	11609512940.00	10553337673.00	10572298342.00	2906220.00	2916950.00	2924816.00
10	American Samoa	643000000.00	659000000.00	658000000.00	55437.00	55537.00	55599.00
11	Antigua and Barbuda	1280133333.00	1364863037.00	1460144704.00	98875.00	99923.00	100963.00
12	Australia	1459600000000.00	1345380000000.00	1204620000000.00	23504138.00	23850784.00	24210809.00
13	Austria	441885000000.00	382066000000.00	390800000000.00	8541575.00	8633169.00	8731471.00
14	Azerbaijan	75244166773.00	53074370486.00	37847715736.00	9535079.00	9649341.00	9757812.00
15	Burundi	3093647227.00	3066681387.00	3007029030.00	9891790.00	10199270.00	10524117.00

Dimensional Model

A snowflake schema was utilized for the data warehouse because it allows for faster analysis and querying as compared to a normalized, OLTP-style data structure



dim_category
category_ID INT(10)
category_name VARCHAR(100)
metacategory_ID INT(10)
Indexes

dim_metacategory
metacategory_ID INT(10)
metacategory_name VARCHAR(100)
Indexes

fact_listings
listingID INT(16)
title VARCHAR(200)
description VARCHAR(150)
categoryID INT(10)
priceUSD DECIMAL(10,2)
vendor VARCHAR(50)
shipFromCountryID INT(10)
marketplace VARCHAR(10)
Indexes

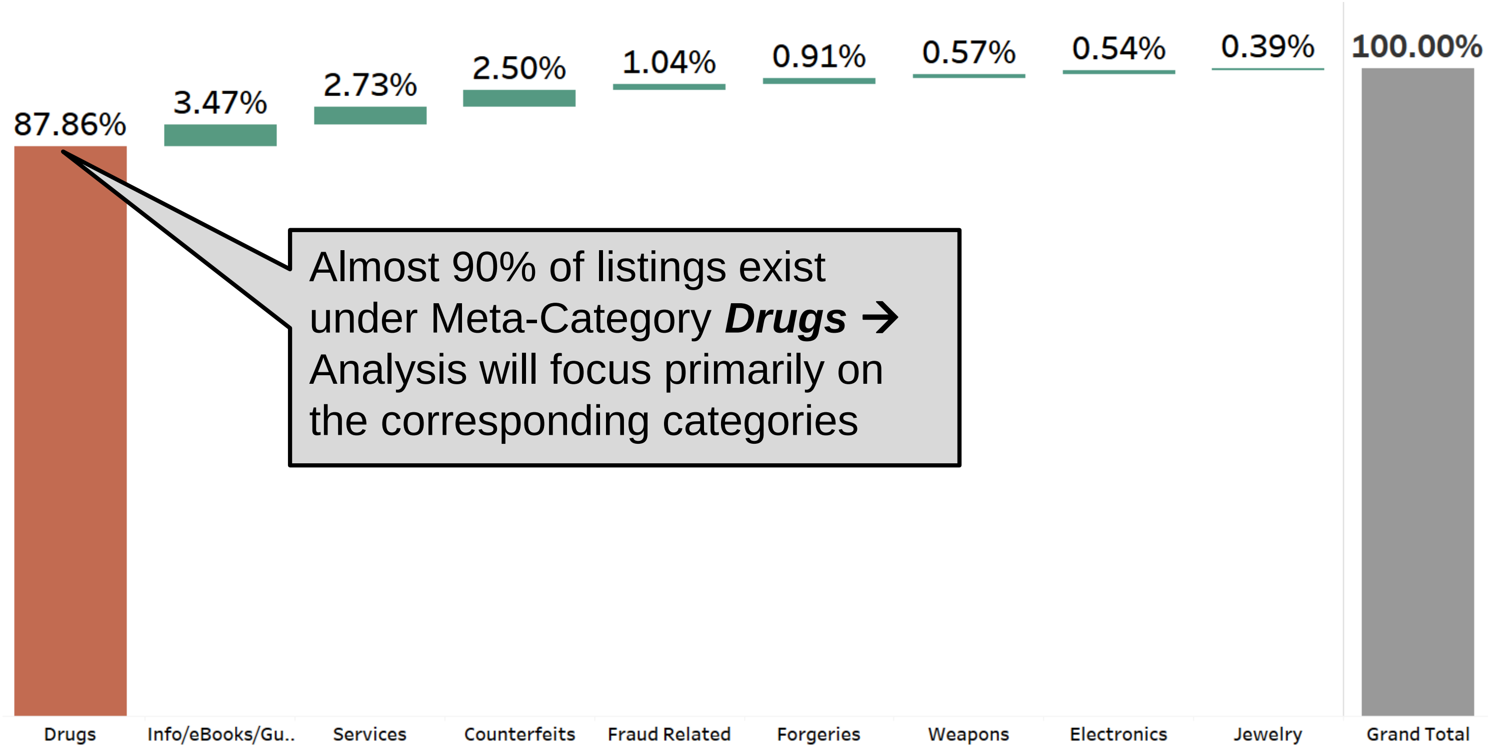
dim_countrystats
country_ID INT(11)
country VARCHAR(200)
GDP_2014 DECIMAL(20,2)
GDP_2015 DECIMAL(20,2)
GDP_2016 DECIMAL(20,2)
population_2014 DECIMAL(20,2)
population_2015 DECIMAL(20,2)
population_2016 DECIMAL(20,2)
Indexes

Findings – Disclaimer

- All analysis that follows is only representative of the data used in this project and is not guaranteed to be generalizable across new darknet marketplace data
- Please consider ETL steps outlined in ***Methodology*** section when interpreting results of analysis

*Removed Unclassified / Misc. Categorizations

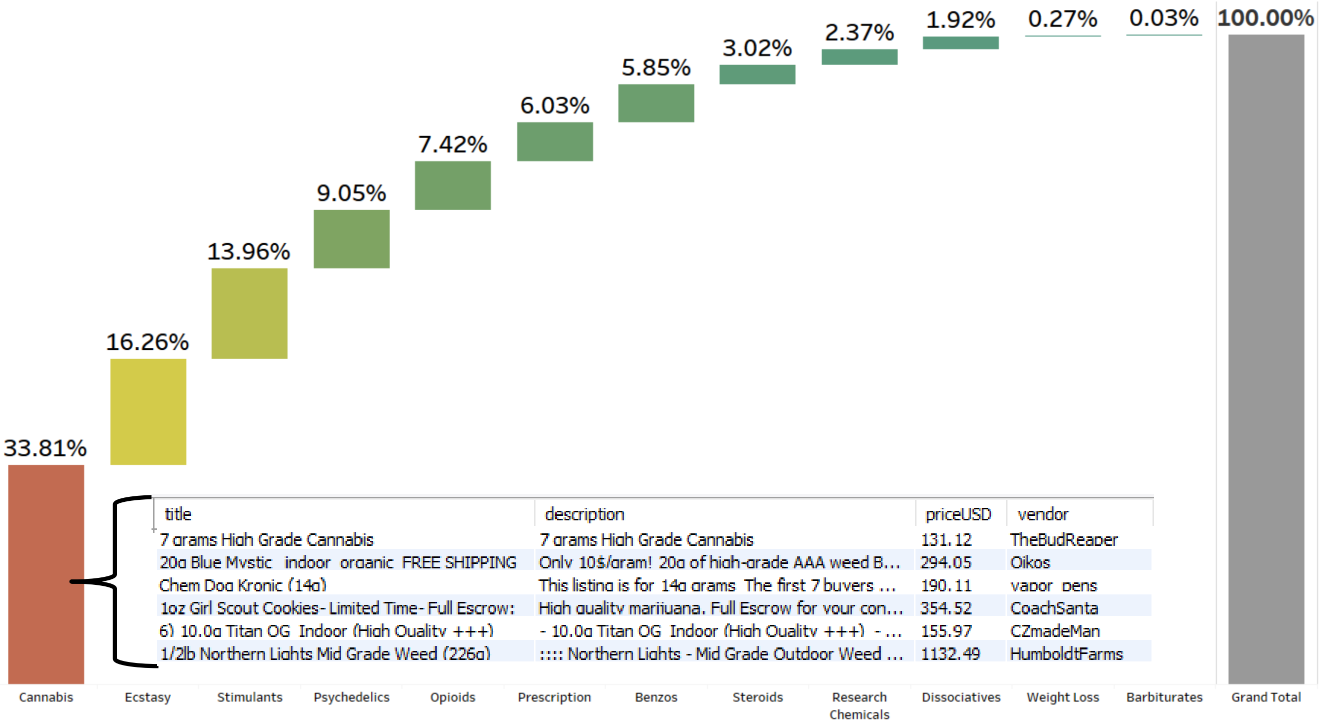
Meta-Category Breakdown*



Almost 90% of listings exist under Meta-Category ***Drugs*** → Analysis will focus primarily on the corresponding categories

*Removed Unclassified / Misc. Categorizations

Drug Categories*



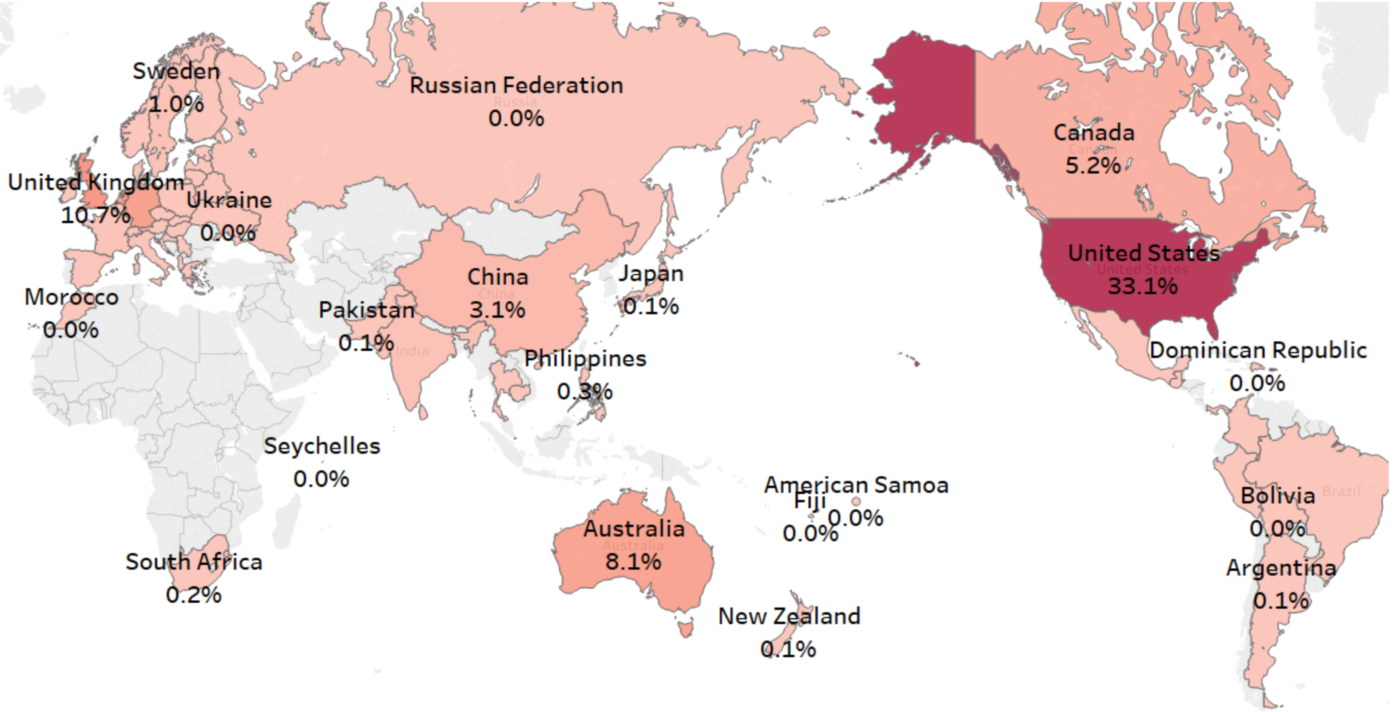
title	description	priceUSD	vendor
7 grams High Grade Cannabis	7 grams High Grade Cannabis	131.12	TheBudReaper
20g Blue Mystic indoor organic FREE SHIPPING	Only 10$/gram! 20g of high-grade AAA weed B…	294.05	Oikos
Chem Dog Kronic (14g)	This listing is for 14g grams The first 7 buyers …	190.11	vapor pens
1oz Girl Scout Cookies- Limited Time- Full Escrow:	High quality marijuana. Full Escrow for your con…	354.52	CoachSanta
6) 10.0g Titan OG Indoor (High Quality +++)	- 10.0g Titan OG Indoor (High Quality +++) - …	155.97	CZmadeMan
1/2lb Northern Lights Mid Grade Weed (226g)	:::: Northern Lights - Mid Grade Outdoor Weed …	1132.49	HumboldtFarms

Key Points

- Listing descriptions are varied and denote different item quantities; prices exhibit a large range
- Top 5 categories account for ~80% of classified Drug listings
- Do products listed in any top category originate from a few primary countries?

Executive Summary | Business Use Case | Methodology | Findings | Recommendations | Lessons Learned | Appendix

Percentage of Drug Listings, By Country

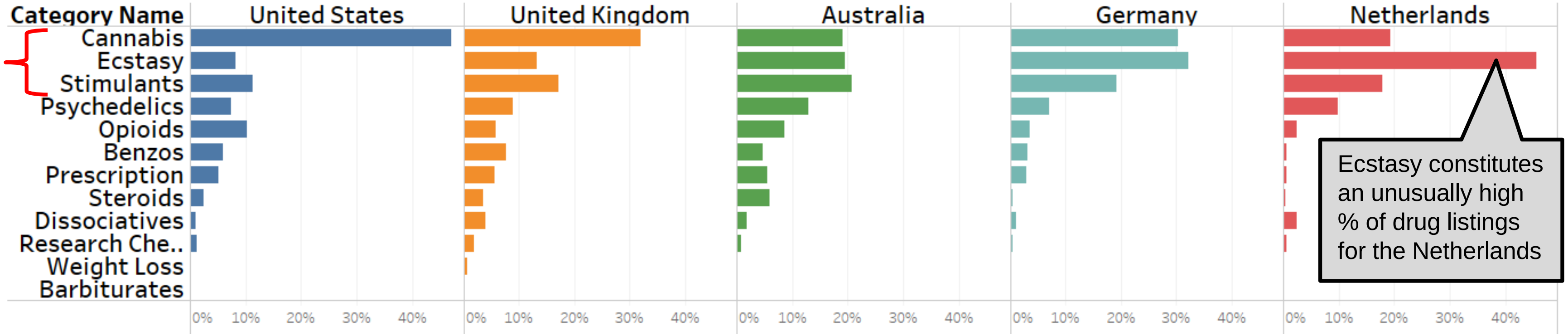


Only 5 countries (U.S., Australia, U.K., Germany, Netherlands) seem to be listed as an origin point for drugs a sizeable amount of the time

*Removed Unclassified / Misc. Categorizations

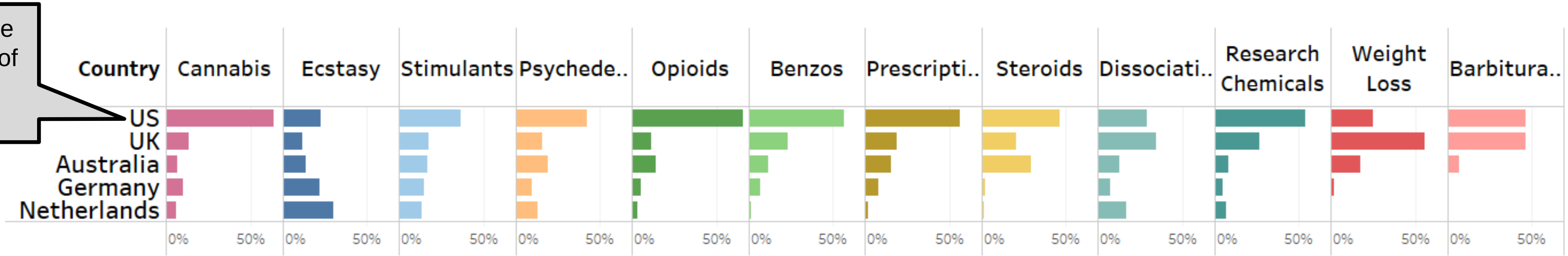
Top 5 Countries – Drill Down*

Cannabis, Ecstasy, Stimulants generally constitute the top 3 categories

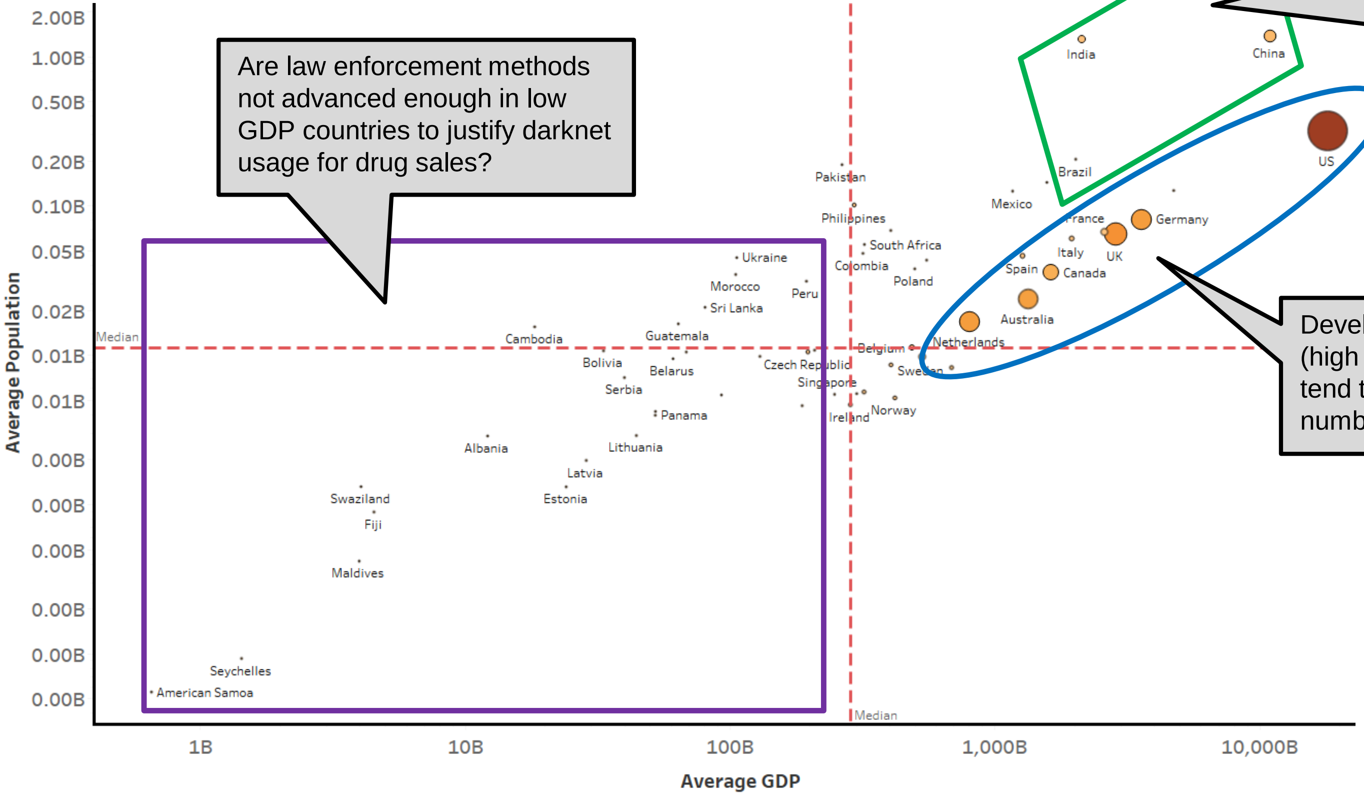


Ecstasy constitutes an unusually high % of drug listings for the Netherlands

The US has the highest share of listings in 8/12 categories



GDP vs. Population (Bubble Size equals # Drug Listings)



Are law enforcement methods not advanced enough in low GDP countries to justify darknet usage for drug sales?

BRIC economies have considerably less drug listings on 3 marketplaces used for this analysis →

- Are other darknets more popular?
- Are drug laws less enforced or less strict?

Developed countries (high GDP, high Pop.) tend to have a higher number of drug listings

*Removed Unclassified / Misc. Categorizations. Axes are log-scale. GDP & Population are averages for 2014-2016

Recommendations

- Current database allowed for exploratory analysis
    - Data from more darknet marketplaces can determine if observations made in this analysis are generalizable
- Data was not consistent across different darknet marketplaces
    - Similar time frames, product UOM broken out, etc. will yield more robust comparisons
    - Standardized data will enable predictive analytics
        - Regression – predict product prices based on factors such as item description length, vendor rating, product category
        - Classification – Using existing database of listings, predict where new listings will originate from (country, vendor)
- Listings data can only tell so much of the full story - having access to actual transactions data facilitates much more sophisticated analyses

Lessons Learned

- A good project plan keeps things on track and moving along
- Thinking of the business use case is helpful when trying to combine multiple data sets that are not in the same format
- ETL *does* take the majority of time!
- Ensure your database has the appropriate level of security…

Appendix – Data Sources, 1 of 2

- Agora Listings: https://www.kaggle.com/philipjames11/dark-net-marketplace-drug-data-agora-20142015

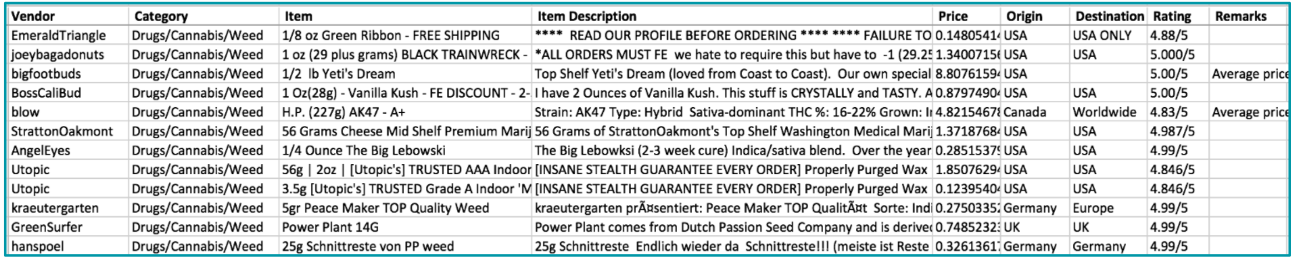
- Hansa & Valhalla Listings: https://polecat.mascherari.press/onionscan/dark-web-data-dumps

- Country GDP: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2015&start=2014

- Country Population: https://data.worldbank.org/indicator/SP.POP.TOTL?end=2016&start=2006&year_low_desc=false

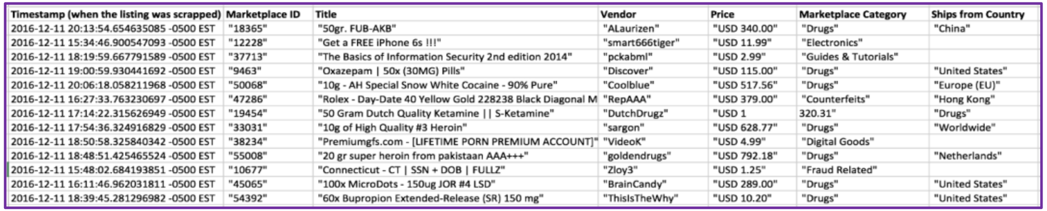
Appendix – Data Sources, 2 of 2

Agora



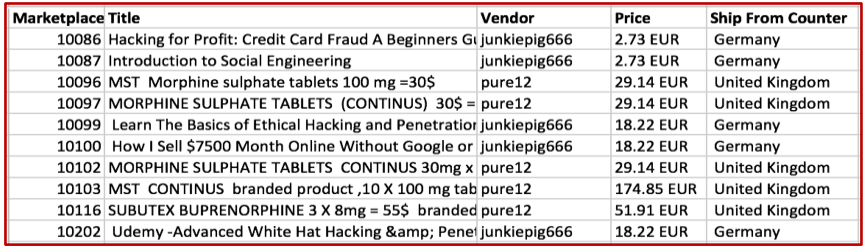
Vendor	Category	Item	Item Description	Price	Origin	Destination	Rating	Remarks
EmeraldTriangle	Drugs/Cannabis/Weed	1/8 oz Green Ribbon - FREE SHIPPING	**** READ OUR PROFILE BEFORE ORDERING **** **** FAILURE TO	0.1480541	USA	USA ONLY	4.88/5	
joeybagadonuts	Drugs/Cannabis/Weed	1 oz (29 plus grams) BLACK TRAINWRECK -	*ALL ORDERS MUST FE we hate to require this but have to -1 (29.25	1.3400715	USA	USA	5.000/5	
bigfootbuds	Drugs/Cannabis/Weed	1/2 lb Yeti's Dream	Top Shelf Yeti's Dream (loved from Coast to Coast). Our own special	8.8076159	USA		5.00/5	Average price
BossCaliBud	Drugs/Cannabis/Weed	1 Oz(28g) - Vanilla Kush - FE DISCOUNT - 2-	I have 2 Ounces of Vanilla Kush. This stuff is CRYSTALLY and TASTY. A	0.8797490	USA	USA	5.00/5	
blow	Drugs/Cannabis/Weed	H.P. (227g) AK47 - A+	Strain: AK47 Type: Hybrid Sativa-dominant THC %: 16-22% Grown: I	4.8215467	Canada	Worldwide	4.83/5	Average price
StrattonOakmont	Drugs/Cannabis/Weed	56 Grams Cheese Mid Shelf Premium Marij	56 Grams of StrattonOakmont's Top Shelf Washington Medical Marij	1.3718768	USA	USA	4.987/5	
AngelEyes	Drugs/Cannabis/Weed	1/4 Ounce The Big Lebowski	The Big Lebowksi (2-3 week cure) Indica/sativa blend. Over the year	0.2851537	USA	USA	4.99/5	
Utopic	Drugs/Cannabis/Weed	56g | 2oz | [Utopic's] TRUSTED AAA Indoor	[INSANE STEALTH GUARANTEE EVERY ORDER] Properly Purged Wax	1.8507629	USA	USA	4.846/5	
Utopic	Drugs/Cannabis/Weed	3.5g [Utopic's] TRUSTED Grade A Indoor 'M	[INSANE STEALTH GUARANTEE EVERY ORDER] Properly Purged Wax	0.1239540	USA	USA	4.846/5	
kraeutergarten	Drugs/Cannabis/Weed	5gr Peace Maker TOP Quality Weed	kraeutergarten prÃ¤sentiert: Peace Maker TOP QualitÃ¤t Sorte: Indi	0.2750335	Germany	Europe	4.99/5	
GreenSurfer	Drugs/Cannabis/Weed	Power Plant 14G	Power Plant comes from Dutch Passion Seed Company and is derive	0.7485232	UK	UK	4.99/5	
hanspoel	Drugs/Cannabis/Weed	25g Schnittreste von PP weed	25g Schnittreste Endlich wieder da Schnittreste!!! (meiste ist Reste	0.3261361	Germany	Germany	4.99/5	

Hansa



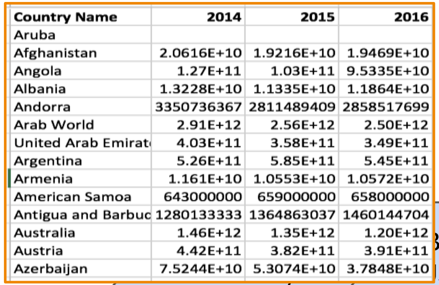
Timestamp (when the listing was scrapped)	Marketplace ID	Title	Vendor	Price	Marketplace Category	Ships from Country
2016-12-11 20:13:54.654635085 -0500 EST	"18365"	"50gr. FUB-AKB"	"ALaurizen"	"USD 340.00"	"Drugs"	"China"
2016-12-11 15:34:46.900547093 -0500 EST	"12228"	"Get a FREE iPhone 6s !!!"	"smart666tiger"	"USD 11.99"	"Electronics"	
2016-12-11 18:19:59.667791589 -0500 EST	"37713"	"The Basics of Information Security 2nd edition 2014"	"pckabml"	"USD 2.99"	"Guides & Tutorials"	
2016-12-11 19:00:59.930441692 -0500 EST	"9463"	"Oxazepam | 50x (30MG) Pills"	"Discover"	"USD 115.00"	"Drugs"	"United States"
2016-12-11 20:06:18.058211968 -0500 EST	"50068"	"10g - AH Special Snow White Cocaine - 90% Pure"	"Coolblue"	"USD 517.56"	"Drugs"	"Europe (EU)"
2016-12-11 16:27:33.763230697 -0500 EST	"47286"	"Rolex - Day-Date 40 Yellow Gold 228238 Black Diagonal M	"RepAAA"	"USD 379.00"	"Counterfeits"	"Hong Kong"
2016-12-11 17:14:22.315626949 -0500 EST	"19454"	"50 Gram Dutch Quality Ketamine || S-Ketamine"	"DutchDrugz"	"USD 1	320.31"	"Drugs"
2016-12-11 17:54:36.324916829 -0500 EST	"33031"	"10g of High Quality #3 Heroin"	"sargon"	"USD 628.77"	"Drugs"	"Worldwide"
2016-12-11 18:50:58.325840342 -0500 EST	"38234"	"Premiumgfs.com - [LIFETIME PORN PREMIUM ACCOUNT]"	"VideoK"	"USD 4.99"	"Digital Goods"	
2016-12-11 18:48:51.425465524 -0500 EST	"55008"	"20 gr super heroin from pakistaan AAA+++"	"goldendrugs"	"USD 792.18"	"Drugs"	"Netherlands"
2016-12-11 15:48:02.684193851 -0500 EST	"10677"	"Connecticut - CT | SSN + DOB | FULLZ"	"Zloy3"	"USD 1.25"	"Fraud Related"	
2016-12-11 16:11:46.962031811 -0500 EST	"45065"	"100x MicroDots - 150ug JOR #4 LSD"	"BrainCandy"	"USD 289.00"	"Drugs"	"United States"
2016-12-11 18:39:45.281296982 -0500 EST	"54392"	"60x Bupropion Extended-Release (SR) 150 mg"	"ThisIsTheWhy"	"USD 10.20"	"Drugs"	"United States"

Valhalla



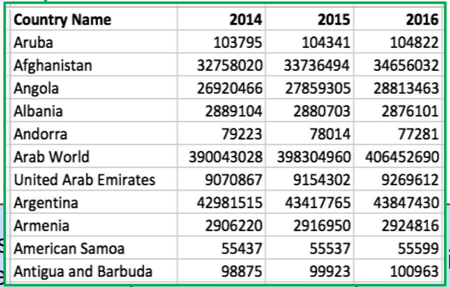
Marketplace	Title	Vendor	Price	Ship From Counter
10086	Hacking for Profit: Credit Card Fraud A Beginners Gu	junkiepig666	2.73 EUR	Germany
10087	Introduction to Social Engineering	junkiepig666	2.73 EUR	Germany
10096	MST Morphine sulphate tablets 100 mg =30$	pure12	29.14 EUR	United Kingdom
10097	MORPHINE SULPHATE TABLETS (CONTINUS) 30$ =	pure12	29.14 EUR	United Kingdom
10099	Learn The Basics of Ethical Hacking and Penetration	junkiepig666	18.22 EUR	Germany
10100	How I Sell $7500 Month Online Without Google or	junkiepig666	18.22 EUR	Germany
10102	MORPHINE SULPHATE TABLETS CONTINUS 30mg x	pure12	29.14 EUR	United Kingdom
10103	MST CONTINUS branded product ,10 X 100 mg tab	pure12	174.85 EUR	United Kingdom
10116	SUBUTEX BUPRENORPHINE 3 X 8mg = 55$ branded	pure12	51.91 EUR	United Kingdom
10202	Udemy -Advanced White Hat Hacking &amp; Penet	junkiepig666	18.22 EUR	Germany

GDP



Country Name	2014	2015	2016
Aruba			
Afghanistan	2.0616E+10	1.9216E+10	1.9469E+10
Angola	1.27E+11	1.03E+11	9.5335E+10
Albania	1.3228E+10	1.1335E+10	1.1864E+10
Andorra	3350736367	2811489409	2858517699
Arab World	2.91E+12	2.56E+12	2.50E+12
United Arab Emirat	4.03E+11	3.58E+11	3.49E+11
Argentina	5.26E+11	5.85E+11	5.45E+11
Armenia	1.161E+10	1.0553E+10	1.0572E+10
American Samoa	643000000	659000000	658000000
Antigua and Barbuc	1280133333	1364863037	1460144704
Australia	1.46E+12	1.35E+12	1.20E+12
Austria	4.42E+11	3.82E+11	3.91E+11
Azerbaijan	7.5244E+10	5.3074E+10	3.7848E+10

Population



Country Name	2014	2015	2016
Aruba	103795	104341	104822
Afghanistan	32758020	33736494	34656032
Angola	26920466	27859305	28813463
Albania	2889104	2880703	2876101
Andorra	79223	78014	77281
Arab World	390043028	398304960	406452690
United Arab Emirates	9070867	9154302	9269612
Argentina	42981515	43417765	43847430
Armenia	2906220	2916950	2924816
American Samoa	55437	55537	55599
Antigua and Barbuda	98875	99923	100963