DEX Vs. CENEX: an insight into a relevant cryptosphere question.

Review of the Problem: There has not been objective data backed analysis between the differences between DEX and Centralized exchanges as far as adoption and usage. It is true that DEX have highly sought after features (anonymity, less well known pairs) but fail in user interfaces and usability. On the other side of the spectrum, centralized exchanges enjoy larger volumes and access to fiat pairings, but lack the trustless nature prevalent in crypto. This comparative study intends to investigate the features unique to both types of exchange markets.

Description of the Data and research agenda:

We intend to first compile a list of exchanges from sources like https://coinmarketcap.com/rankings/exchanges/ and https://www.coingecko.com/en/exchanges, then categorize them as decentralized or centralized accordingly. From those data sources, we'll find several features that describe various aspect of the markets, for which we'll then perform an analysis comparing each along dimensions such as:

Environment:

- Region / location;
- Regulations;

User-facing features:

- User interfaces;
- Features;
- Pros and cons;

Operation properties:

- Delay on price swings
- Diversity of the pairs
- How they work (centralized = fixed platform, decentralized = facilitated exchange on the blockchain)

- Stablecoin use
- Volume
- Slippage

We'll begin characterizing the exchanges according to their features to determine the "average" DEX and CENEX. We'll then perform statistical tests to determine if there are statistically significant differences between the features. Also, we'll perform time series analysis to track changes that can be observed over time, such as the number of pairs and volume. In the end, we'll provide executive summary of all results with supporting code.

Deliverables, Timeline and Milestones

In order to fulfill the purpose of this work, the Lykke Research Hub, as well as relevant parties, will be provided with the following elements, so as to foster reproducibility:

- The data that were gathered and used for the study;
- A report written in Python or R, duly available on any relevant platform;
- An executive report on the results of te work.

The entirety of the activities for this work will comprise two months, as well as these phases:

- Data gathering (~0.8 months);
- Data examination and analysis (~0.8 months);
- Report writing (~0.4 months).