

Project Report

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The main purpose of this project is to classify countries based on certain economic indicators, whether they have a real estate-oriented or an automobile-oriented economic profile. This distinction aims to provide insight into the macroeconomic structures of countries and to form the basis for comparative analyses.

The following 7 metrics for 30 randomly selected countries were used in the study:

- Global Rent Price Index (5 year %)
- Home Ownership Rate (%)
- Average Housing Prices (USD/m²)
- Share of Construction in GDP (%)
- Motor Vehicle Production (unit)
- Motor Vehicles per Capita (number of vehicles per 1000 people)
- Vehicle Exports (USD thousand)

These variables represent the development of countries in terms of housing market and automotive sector.

In countries with no production or export, the value “0” was assigned and the empty fields were filled with 0.

The dataset was collected using real values (this was the hardest part)

The variables in the dataset were at very different scales (for example, the vehicle production in one country was 1,000 while in another it was 1,000,000) and MinMaxScaler (0–1 normalization) was applied to balance them.

Two basic scores were calculated for the classification of countries: Real Estate Score and Automobile Score.

Each score was collected with the indicators of its own category and an equal weight was applied.

The two scores calculated for each country were compared. (If Real Estate Score > Automobile Score, the country was classified as a “Real Estate Country”. Otherwise, the country was considered as a “Automotive Country”).

With this project, whether the countries have real estate or automotive-oriented economies was classified with economic metrics,