Cars Market Analysis

In Egypt

By: Mahmoud Ahmed Shimy

TABLE OF CONTENTS

01 Business Understanding

02 Generating Questions

03 Gathering & Understanding Data

04 Cleaning Data

05 Analyzing Data

06 Conclusions

01

Business Understanding

Before we begin...

Objectives

- Identifying factors that affect the demand for used cars.
- Analyzing pricing trends for different car makes, models, and years.
- Impact of used car prices on the overall automotive industry and economy

Target Audience

- Car dealerships and resellers.
- Buyers looking for used cars.
- Financial institutions offering auto loans.
- Insurance companies evaluating used car values

02

Generating **Questions**

6 Main questions to answer

Price Analysis

- What factors affect the price?
- How is the price range varying over different locations.

Brands and models

- The most popular brands for cities.
- The price range for each brand.

Transmission & Fuel Type

- How transmission type affect price.
- How common are fuel type for each car model

Car Kilometers

- How does no. of kilometers changes over brands.
- What is the avg kilometers for each city.

Car Body Type

- The most preferred color for each body type.
- Avg price for each type.

Engine Size

- How does engine size vary over car types?
- What is the avg engine size for each manufacture year

kaggle

03

Gathering & Understanding Data

Brand	Model	Body	Color	Year
BMW	X6 M	SUV	White	2024
BMW	520	Sedan	Black	2023
Chery	Tiggo 3	hatchback	Brown	2023
Chevrolet	N300	Sedan	Black	2023
Chevrolet	Optra	Sedan	Dark blue	2023
Hyundai	Accent RB	Sedan	Silver	2024
Hyundai	Elantra HD	Sedan	Dark grey	2023
Hyundai	Tucson	SUV	Green	2023
Hyundai	IX 35	Hatchback	Petroleum	2023
Kia	Xceed	SUV	Gray	2024
Kia	Sportage	SUV	Black	2024
Kia	Cerato	Sedan	Black	2023
Mercedes	A200	hatchback	Black	2023

Fuel	Kilometers	Engine CC	Trasmission	Price	location
gas	300,000	1600	Automatic	1,600,000 ج.م	Port Said
gas	25,000	1000	Manual	35,000 ج.م	El Haram
gas	64,000	1000	Manual	42,000 ج.م	6th of October
Benzine	80,000	1400	Manual	80,500 ج.م	Qalyubia
gas	80,000	1600	Manual	110,000 ج.م	Madinaty
Benzine	120,000	1324	manual	40,000 ج.م	Cairo
Benzine	135,000	1000	manual	17,500 ج.م	Helwan
Benzine	135,000	1600	manual	18,000 ج.م	Cairo

The used dataset is a combination of 2 datasets, one is scraped from **hatla2ee** website, and the other is uploaded on Kaggle website.

Understanding Data Columns

Column	Description	Column	Description
1. Brand	Car Brand (Hyundai, Kia,…)	**7. Kilometer**	The Distance traveled
2. Model	Car model (Verna, Cerato,…)	**8. Engine CC**	Engine Capacity (in CC)
3. Body Type	Type of body (Sedan, SUV,…)	**9. Transmission**	Gear type (Manual or Automatic)
4. Color	Color of the car	**10. Price**	The price of the vehicle in EGP
5. Year	Manufacturing year	**11. Location**	The location of the vehicle
6. Fuel	Fuel Type (Gasoline, diesel,…)		

04

Cleaning Data

Cleaning Data

Handling Nulls

- Type, fuel and engine size missing cols.

```
=TEXTJOIN(" ";TRUE;D2;E2)
```

D	E	F
Brand	model	car name
Hyundai	Accent RB	Hyundai Accent RB
Hyundai	Verna	Hyundai Verna
Daihatsu	Charade	Daihatsu Charade

car name	Body
Hyundai Accent RB	Sedan
Hyundai Verna	Sedan
Daihatsu Charade	Sedan
Suzuki Celerio	hatchback
Suzuki Swift	Sedan
Renault Megane	Sedan

```
=VLOOKUP(C13701;car_body;2)
```

C	D
Chevrolet Lanos	Sedan
Hyundai Verna	Sedan
Chevrolet Lanos	Sedan
Chevrolet Lanos	Sedan

Cleaning Data

Handling Nulls

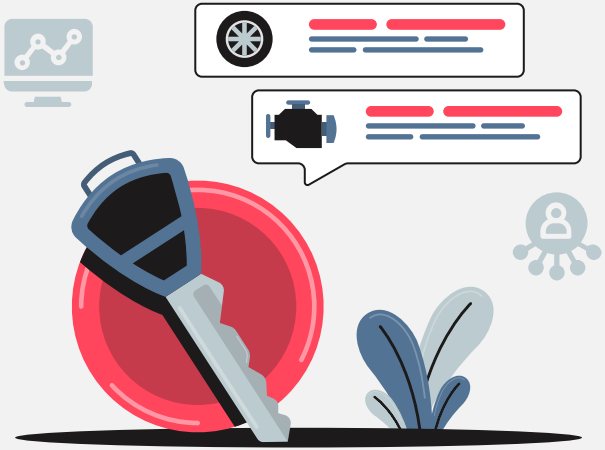
- Type, fuel and engine size missing cols.
- After handling Null Values, the remaining rows is 62.7K

Feature Engineering

- Creating an “Age” column derived from manifacture year.
- Creating an “Governorate” column derived from car location.
- Creating an “Price range” column derived from car price.

Normalizing data

- Normalizing data values like price to egp and so on…



05

Analyzing Data

Data Overview

62,739

No. of listed cars

2011

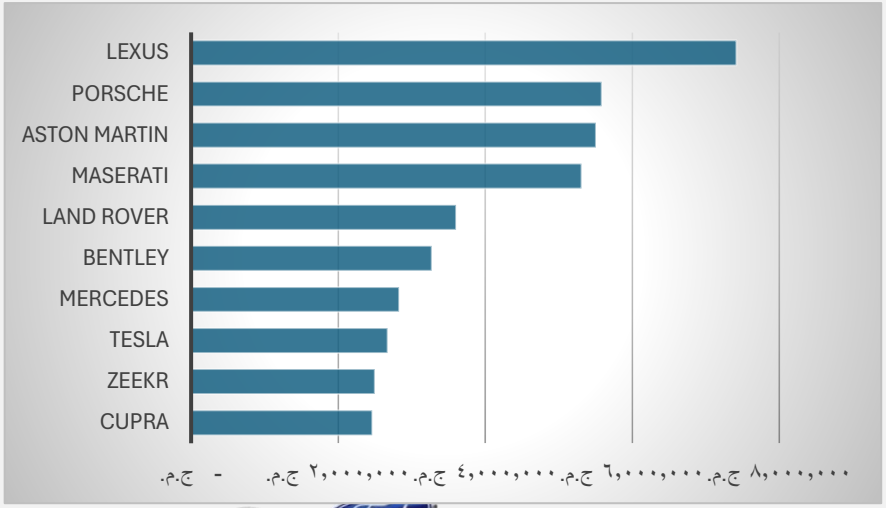
Average manifacture year

626,699 EGP

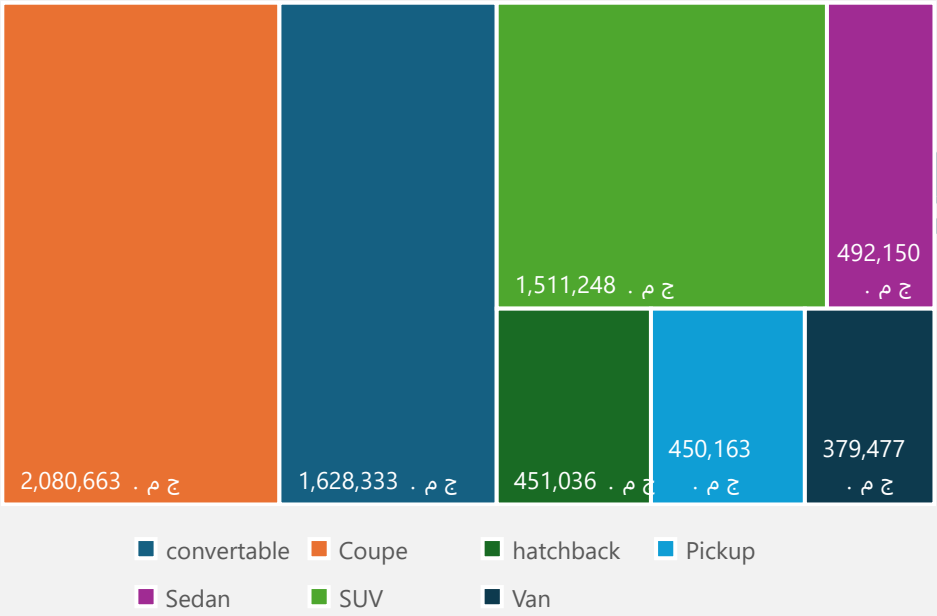
Average price

Factors affecting the price

AVG price by car brand

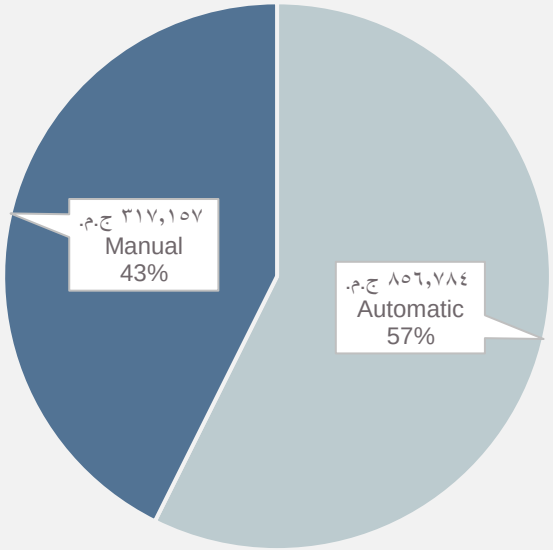


AVG price by car type

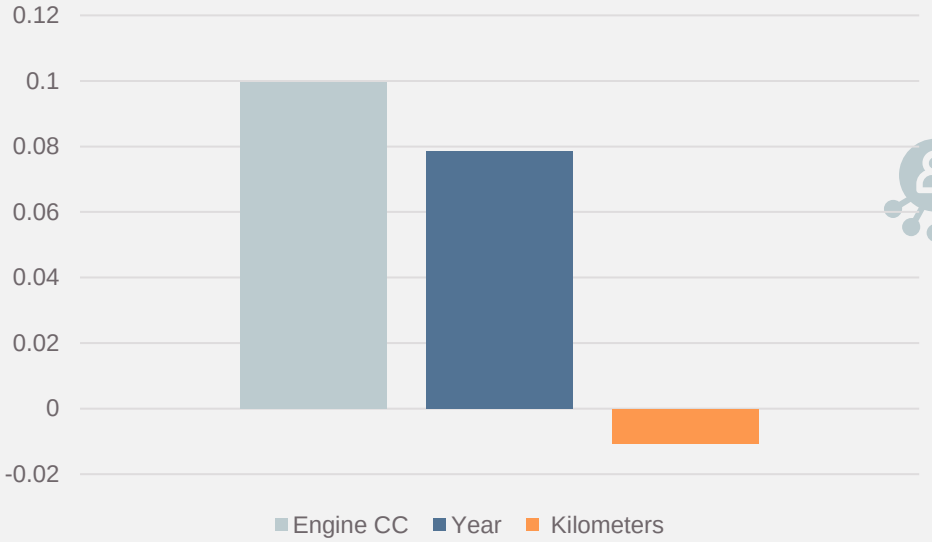


Factors affecting the price

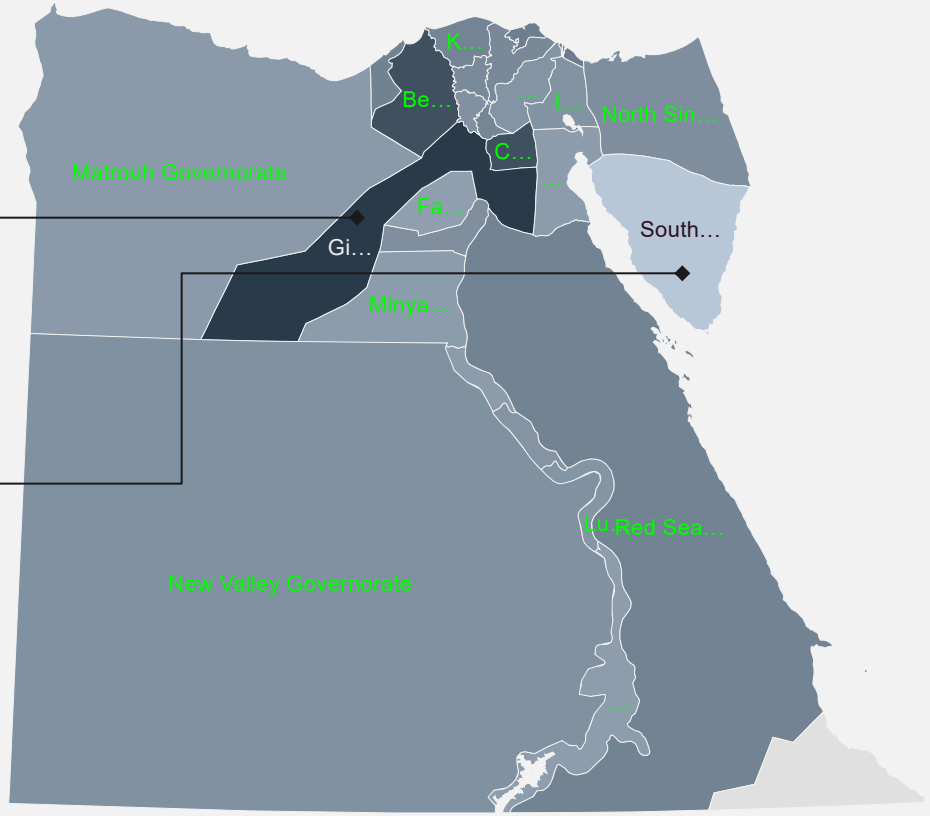
AVG price by car tranmission



Other factors affect the price



Price change over governorates



Average of Price

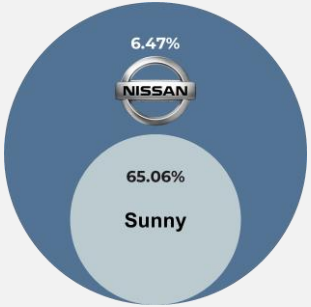
839,848 ج.

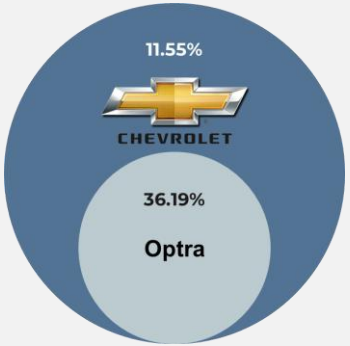
127,461 ج.

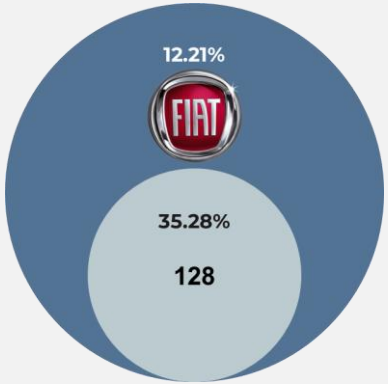
Avg Prices

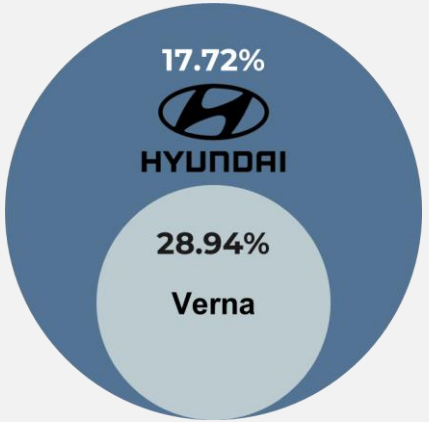
The minimum prices in **South sinia**, while the maximum prices are usually in **Giza.**

Most common brands in the market









544,260 EGP

2015

296,148 EGP

2015

23,725 EGP

1985

209,743 EGP

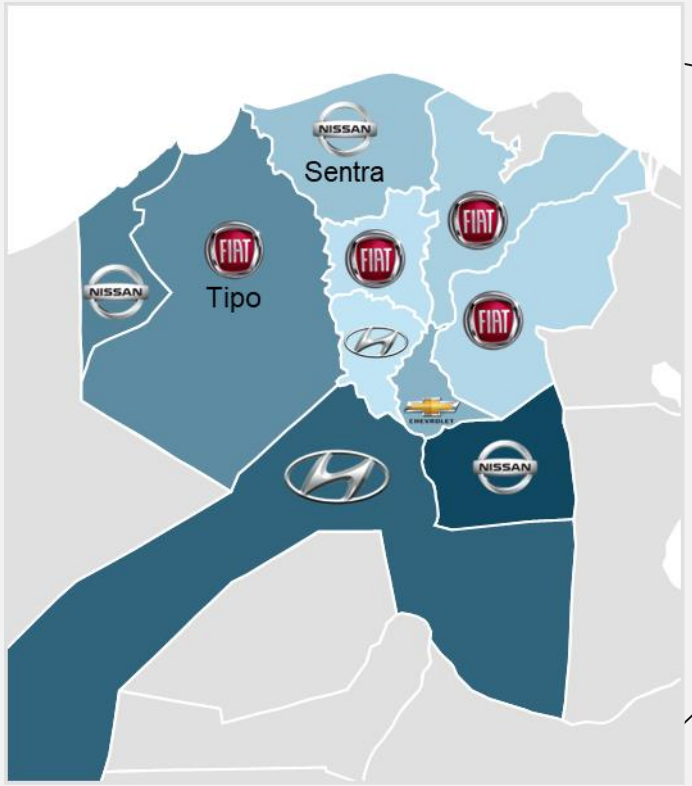
2013

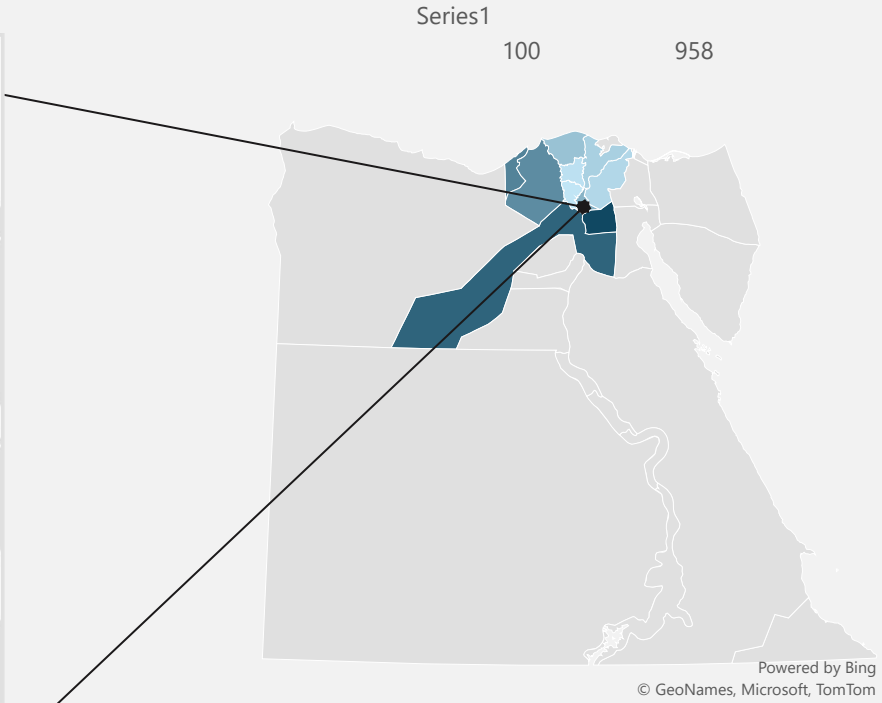
The newest Cars in the market

Tesla motors entered the Egyptian market in **2022** with average price **2.6** Million EGP

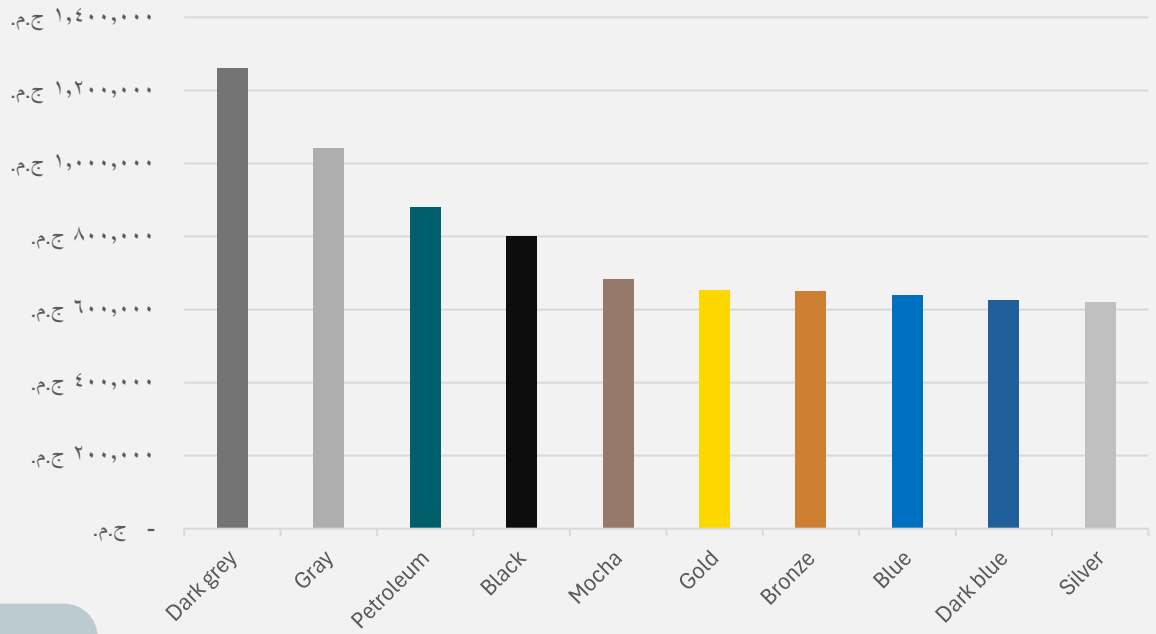
Cupra is the newest brand that enter the Egyptian market in late **2022** with average price **2.4** Million EGP

Most common car for governorates





Price trends by color



Market by Class

Medium class

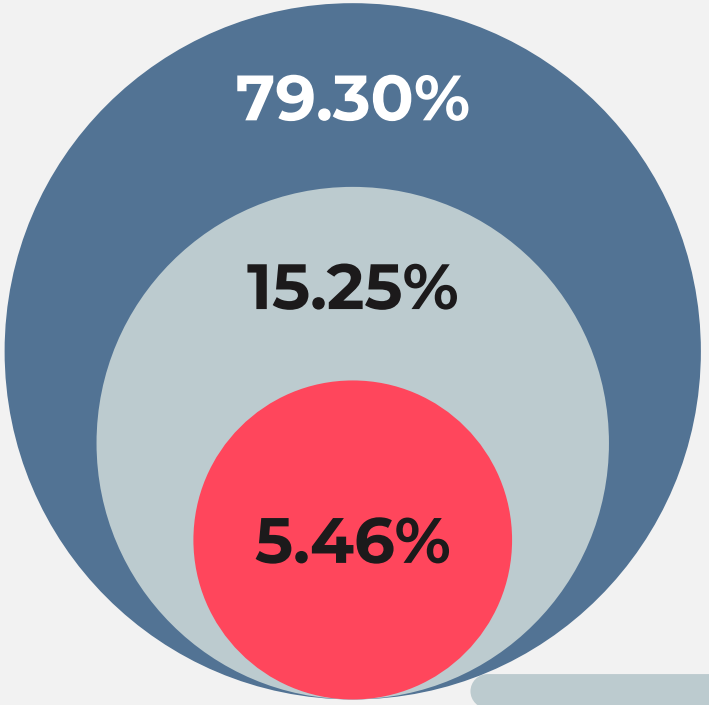
- The medium class started from **1M** EGP to **2M** EGP.
- The most common car brand in this class is **Hyundai** with **18.6%**

Economic class

- The economic class is under **1M** EGP.
- The most common car brand in this class is **Fiat** with **58.19%**

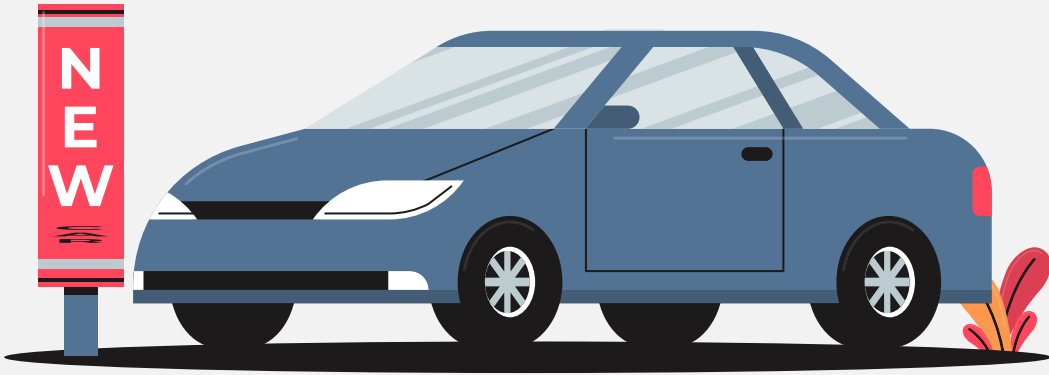
High class

- The high class is above **2M** EGP.
- The most common car brand in this class is **Mercedes** with **26.15%**



06

Conclusion



Conclusion

Car Price

For minimum car prices we suggest to buy from **South Sania** or **Faiyum** with low **engine capacity** and appropriate **manufacture year**.

Transmission

Automatic Transmission cause more in price by about **50%**
However, it's more common in the market than manual with **57%**

Car brand

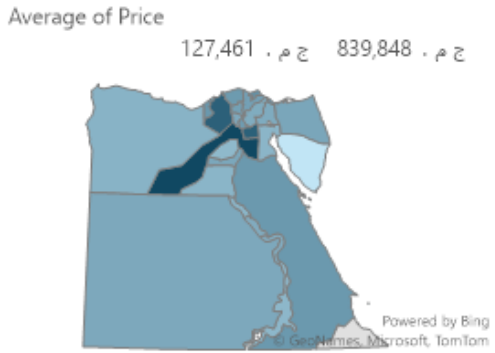
Hyundai Verna is the most Dependability car in the Medium class and in Egypt.
However, **Fiat** is the most common brand in the economic class,
And **Mercedes** is the most common in high class

Car color

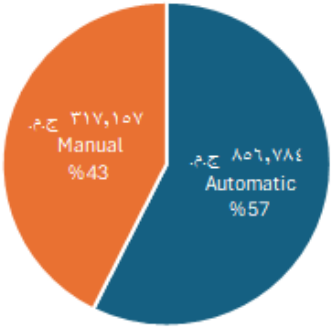
The Expensive cars tend to be Gray colored.

Egyptian Car Market Dashbaord (By Mahmoud Shimy)

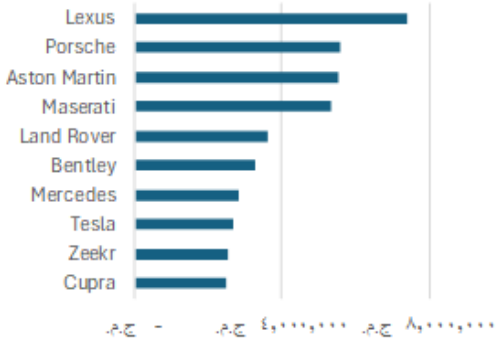
Average price by governate



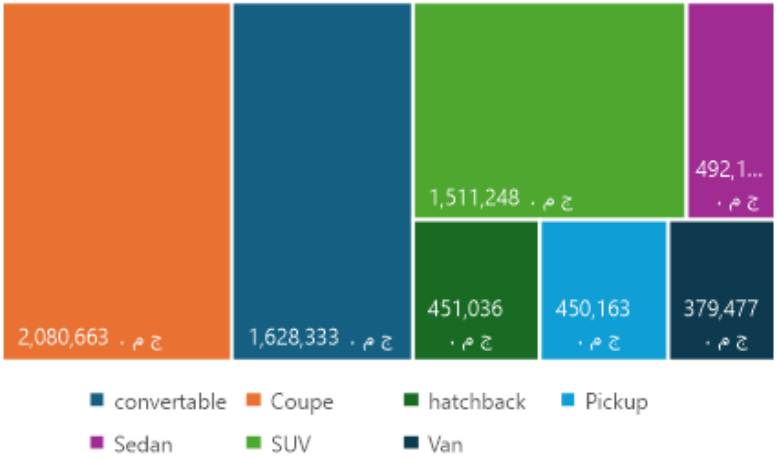
Average price by transmission



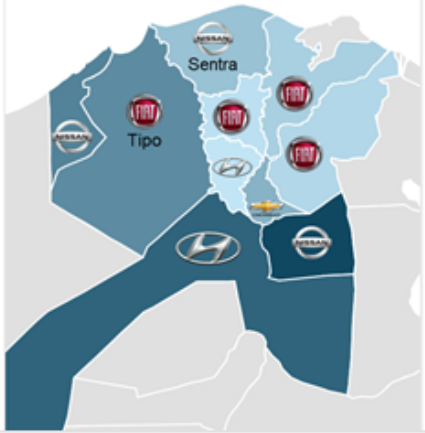
Average of Price by car brand



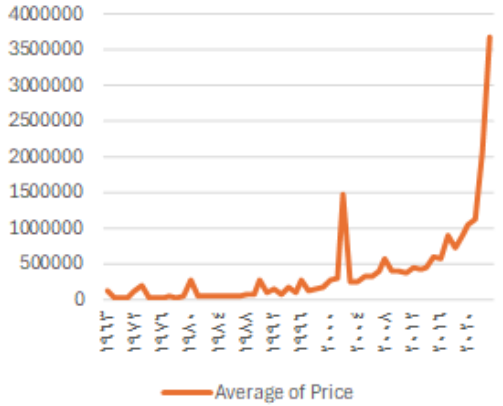
Average price by body type



Most common car by governorate



Average of price over manufacture years



THANKS!

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