

Insurance Pricing: Drivers, Distribution & Estimator

Total Policies

1338

Average Charges

\$13.268

Average BMI

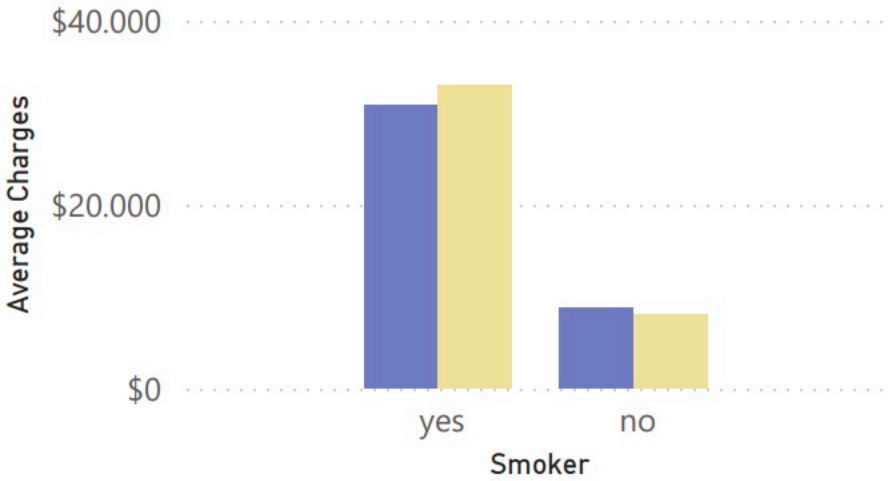
30,7

Smoker Rate

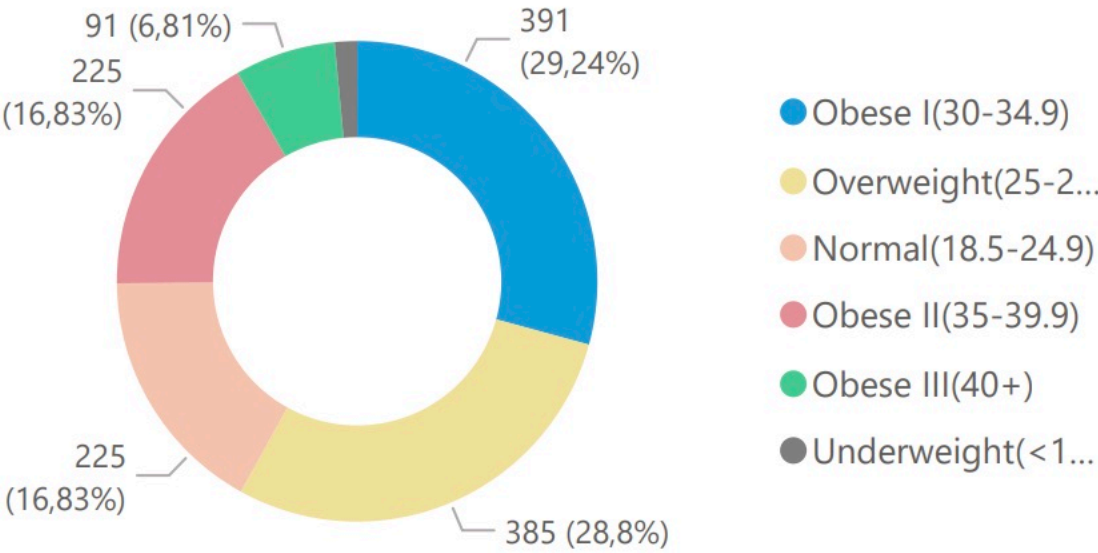
%20,4

Average Charges: Smoker vs Non-Smoker
(by Gender)

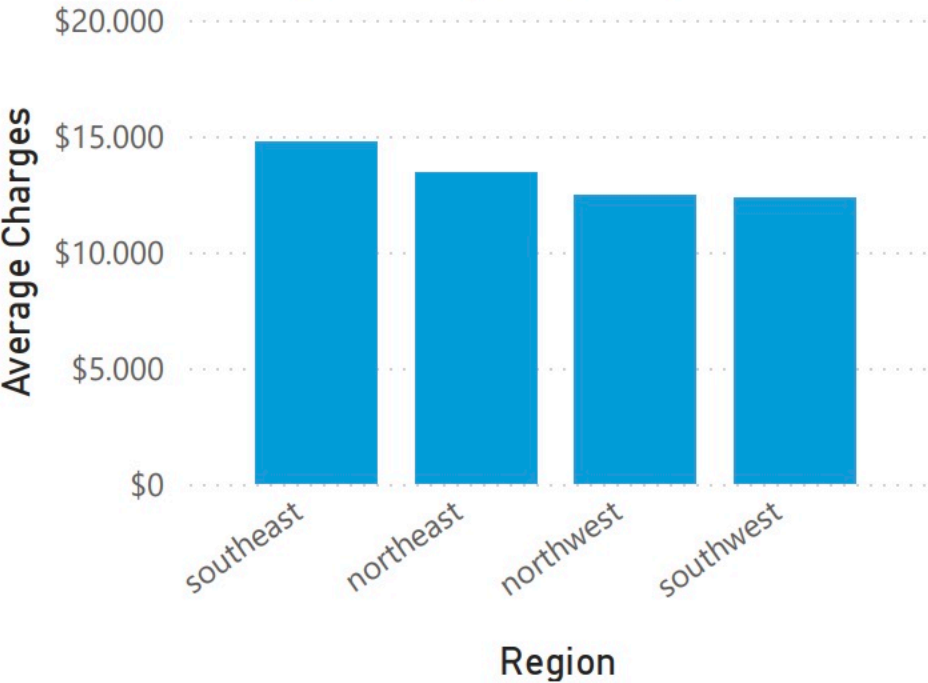
Gender ● female ● male



BMI Category Distribution

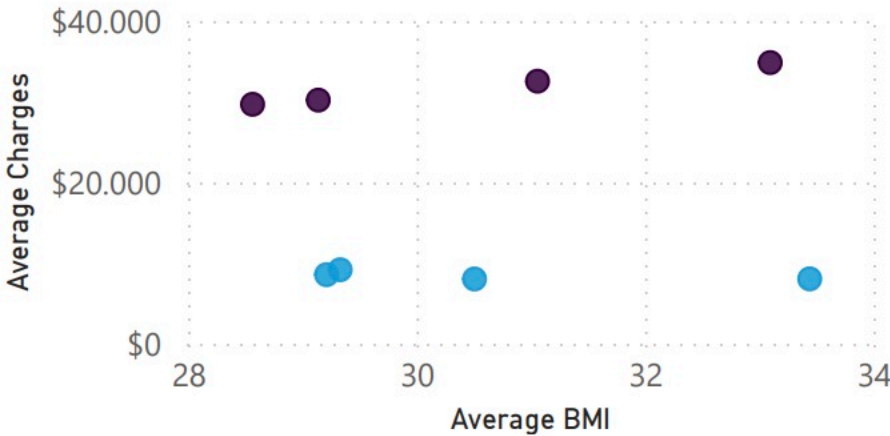


Average Charges by Region



BMI vs Charges (by Smoking Status & Region)

Smoker ● no ● yes



Average Charges by Age Group and BMI Category

Age Band	Normal(18.5-24.9)	Obese I(30-34.9)	Obese II(35-39.9)	Obese III(40+)	Overweight(25-29.9)	Underweight(< 18.5)	Totals
18-25	6118	11264	10611	15713	6968	3772	9061
26-35	9120	10987	16709	7150	8123	12288	10495
36-45	11576	14391	18366	19731	10560	10847	13493
46-55	13907	16244	18309	19504	14308	9818	15987
56-64	15800	20458	20429	20430	16654	12370	18796
Totals	10409	14420	17022	16785	10972	8852	13268

Smoker Cost Share

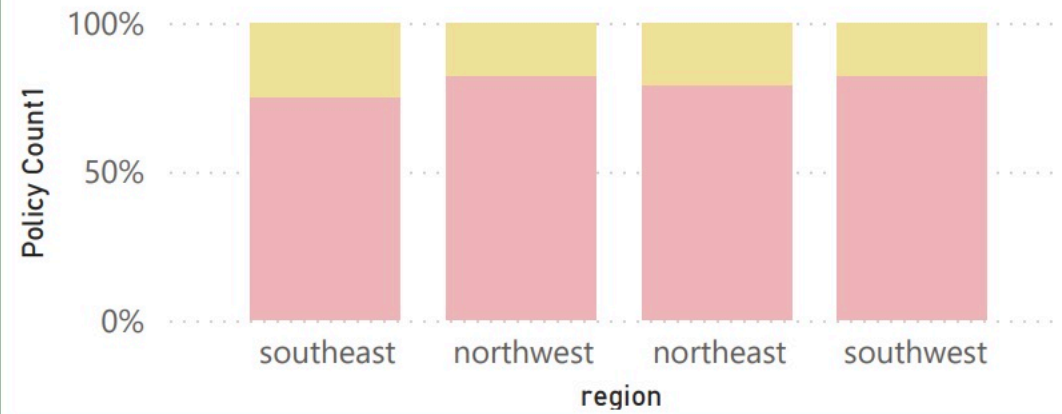
%49

Top 10% Cost Share

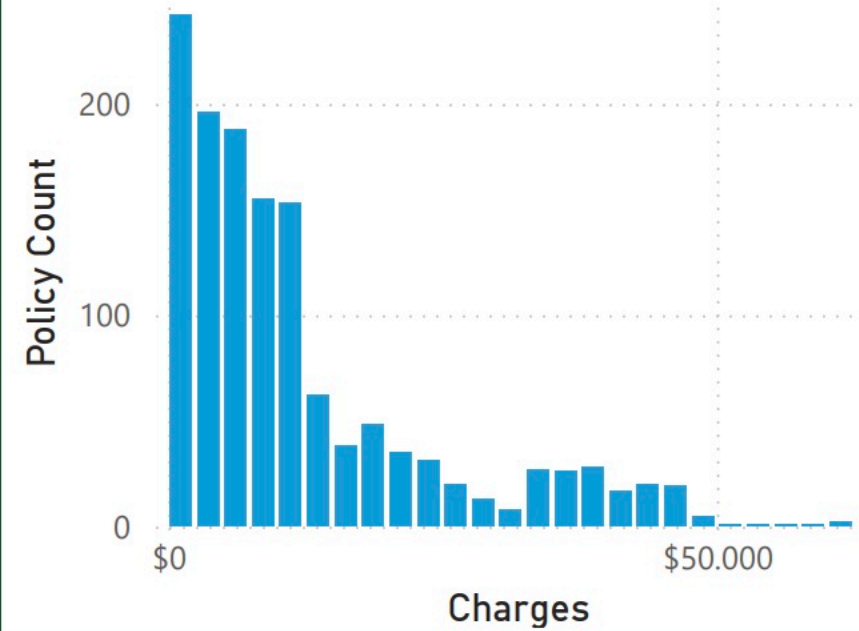
0,32

Policy Mix by Region & Smoking

smoker no yes



Charge Distribution (Binned)

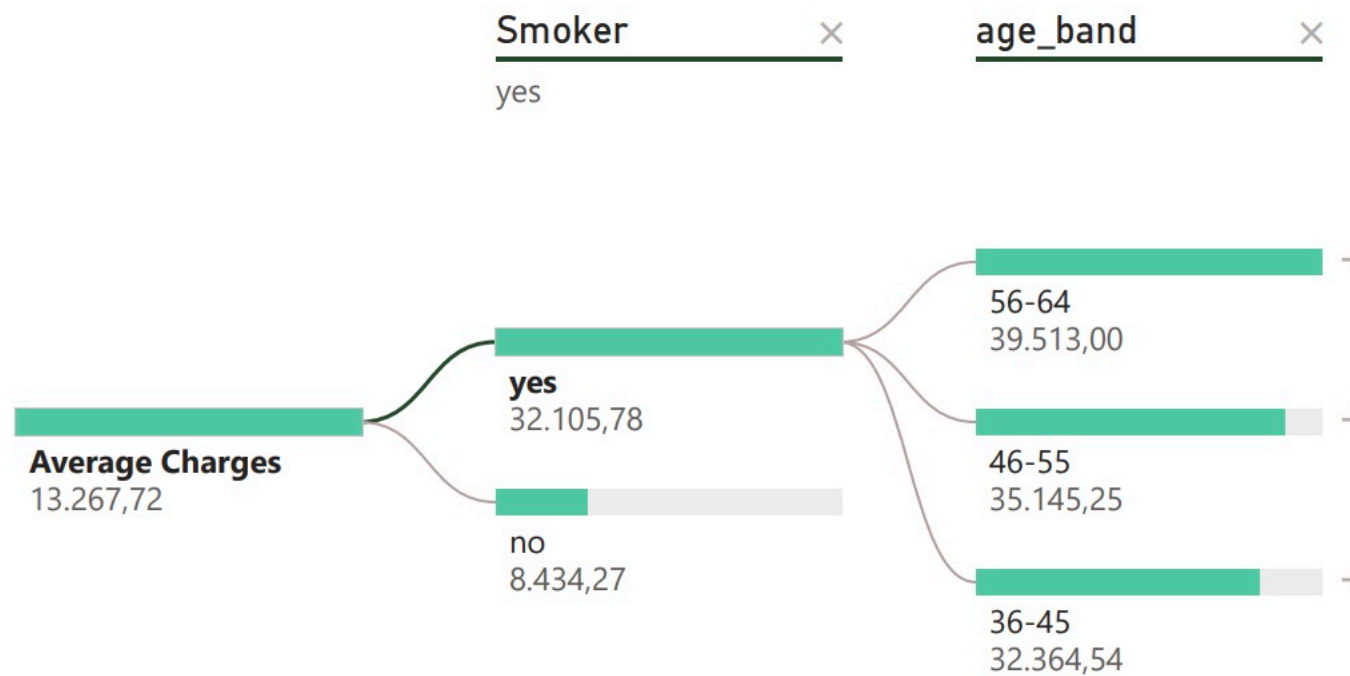


Top 10 Highest Charges

charges	region	sex	smoker	age	bmi	children
58.571	northeast	female	yes	31	38,10	1
55.135	northwest	female	yes	33	35,53	0
60.021	northwest	male	yes	52	34,49	3
48.885	southeast	female	yes	44	38,06	0
63.770	southeast	female	yes	54	47,41	0
62.593	southeast	male	yes	45	30,36	0
48.970	southeast	male	yes	59	41,14	1
49.578	southeast	male	yes	64	36,96	2
51.195	southwest	male	yes	28	36,40	1
52.591	southwest	male	yes	60	32,80	0



Average Charges Breakdown



Key influencers Top segments

What influences charges to Increase ?

When...
...the average of charges increases by

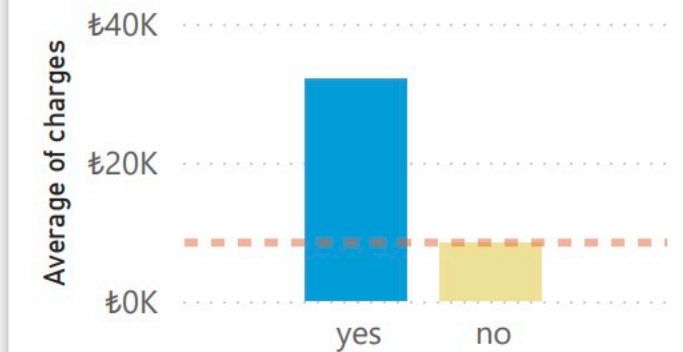
Smoker is yes

₺23,67K

Age Band is 56-64

₺6,59K

← charges is more likely to increase when Smoker is yes than otherwise (on average).



☐ Only show values that are influencers

Age

49



BMI

22,50



Children

0

1

2

3



Sex

☒ female

☐ male

Smoker

smoker

☐ no

☒ yes



Region

☒ northeast

☐ northwest

☐ southeast

☐ southwest



Estimated Premium

Based on selected inputs

33.079

Feature Contributions

23.848,53

Smoking Impact

12.585,96

Age Impact

7.631,85

BMI Impact

951,00

Children Impact

0,00

Sex Impact

0,00

Region Impact

Model Coefficients

Feature

smoker_yes

children

bmi

age

sex_male

region_northwest

region_southwest

region_southeast

0

10.000

20.000

Coefficient (USD)

How it works?

This estimator uses a Linear Regression model:

Premium = Intercept + Σ (feature × coefficient)

Coefficients are learned from the **training dataset**.

Contribution cards show the per-feature impact on the final estimate.

Actual premiums may vary by insurer and policy terms.