

CONJOINT ANALYSIS MARKET SIMULATOR WITH TABLEAU

ADVANCED DATA DRIVEN DECISION MAKING

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Case Study's Questions

Question 1

Suppose your new **Xiaomi smartphone** would be launched with the lowest attribute levels on the four non price attributes, e.g. **Screen=LED**, **Sound=Mono**, etc Your boss thinks that a price of **350** would be reasonable for such a product, as you would be the cheapest competitor in the market.

1.1 What will be preference share that this product will attain with **First Choice** and **Logit** in EMEA market

The First Choice Preferences Shared

ID	PSFC_P1	PSFC_P2	PSFC_P3
Total génér..	38	214	100
2	0	0	1
3	0	1	0
8	1	0	0
9	0	1	0
10	0	0	1
11	0	1	0

Samsung is Top 1, then **Apple** (Top 2) and **Xiaomi**.

The Logit Preferences Shared

ID	PSL_choice_P1	PSL_P2	PSL_P3
Total génér..	47,183	197,355	107,462
2	0,122	0,109	0,769
3	0,009	0,660	0,331
8	0,749	0,164	0,087
9	0,098	0,766	0,136
10	0,003	0,287	0,710
11	0,001	0,675	0,324

Samsung is Top 1, then **Apple** (Top 2) and **Xiaomi**.

1.2 How would you change the price to increase revenues? By how much will your revenues change ?

First Choice

Price	350	300	400	450
Market share	10.80%	15.91%	4.26%	2.56%
Revenue	378000000	477300000	170400000	115200000
Change	0.00%	26.27%	-54.92%	-69.52%

Based on **First Choice**, we would suggest to decrease the price by **50\$**, to sell the **Xiaomi** phone to **300\$ per unit**. This would increase by **26.27% the total revenues**.

Logit

Price	350	300	400	450
Market share	13.40%	18.22%	6.66%	3.62%
Revenue	469000000	546600000	266400000	162900000
Change	0.00%	16.55%	-43.20%	-65.27%

Based on **Logit**, we would suggest to decrease the price by **50\$**, to sell the **Xiaomi** phone to **300\$ per unit**. This would increase by **16.55% the total revenues**.

Question 2

Assuming if you could improve **only one attribute level by one unit** (i.e. from Screen=LED to Screen=QLED), **which attribute would you choose to maximise your revenues** assuming that the price is fixed at **350\$** ?

First Choice

Model	Base	QLED	Stereo	Dual Sim	60 MP
Market share	10.80%	13.64%	29.55%	25.57%	27.84%
Revenue	378'000'000	477'400'000	1'034'250'000	894'950'000	974'400'000
Change	0%	26%	174%	137%	158%

Logit

Model	Base	QLED	Stereo	Dual Sim	60 MP
Market share	13.40%	16.80%	31.33%	24.69%	28.13%
Revenue	469'000'000	588'000'000	1'096'550'000	864'150'000	984'550'000
Change	0%	25%	134%	84%	110%

We would choose from both, **First Choice** and **Logit**, the **Stereo** attribute, which would give the maximum revenues with a fixed price at 350\$.

Question 3

Assuming your **R&D department** gives you the opportunity to change the **screen** and the **sound**
The following table shows you by how much the **manufacturing cost per unit** will increase for different attribute improvements

3.1 What product will you launch to maximise revenues ?

First Choice

Metrics / Model	LED + Mono	LED + Stereo	LED + Atmos	QLED + Mono	QLED + Stereo	QLED + Atmos	OLED + Mono	OLED + Stereo	OLED + Atmos
Market Share	10.80%	29.55%	43.47%	13.64%	40.34%	51.70%	19.60%	55.11%	61.93%
Revenue	378'000'000	1'034'250'000	1'521'450'000	477'400'000	1'411'900'000	1'809'500'000	686'000'000	1'928'850'000	2'167'550'000

Logit

Metrics / Model	LED + Mono	LED + Stereo	LED + Atmos	QLED + Mono	QLED + Stereo	QLED + Atmos	OLED + Mono	OLED + Stereo	OLED + Atmos
Market Share	13.40%	31.33%	40.79%	16.80%	39.68%	48.41%	21.48%	48.73%	56.59%
Revenue	469'000'000	1'096'550'000	1'427'650'000	588'000'000	1'388'800'000	1'694'350'000	751'800'000	1'705'550'000	1'980'650'000

We would choose from both, **First Choice** and **Logit**, the **Atmos** and **OLED** attributes, which would give the **maximum revenues**.

Expected Revenues

$$\text{First Choice}^{*1/2} + \text{Logit}^{*1/2} = 2'167'550'000^{*1/2} + 1'980'650'000^{*1/2} = 2'074'100'000\$$$

3.2 What product will you launch to maximise profit assuming current manufacturing cost of 200\$?

First Choice

Metrics / Model	LED + Mono	LED + Stereo	LED + Atmos	QLED + Mono	QLED + Stereo	QLED + Atmos	OLED + Mono	OLED + Stereo	OLED + Atmos
Market Share	10.80%	29.55%	43.47%	13.64%	40.34%	51.70%	19.60%	55.11%	61.93%
Revenue	378'000'000	1'034'250'000	1'521'450'000	477'400'000	1'411'900'000	1'809'500'000	686'000'000	1'928'850'000	2'167'550'000
Costs per phone	200	210	240	220	230	260	240	250	280
Costs	216'000'000	620'550'000	1'043'280'000	300'080'000	927'820'000	1'344'200'000	470'400'000	1'377'750'000	1'734'040'000
Profit	162'000'000	413'700'000	478'170'000	177'320'000	484'080'000	465'300'000	215'600'000	551'100'000	433'510'000

Based on **First Choice**, we would suggest picking the **OLED** and **Stereo** attributes, that would give a **total profit of 551 '100' 000 \$**.

Logit

Metrics / Model	LED + Mono	LED + Stereo	LED + Atmos	QLED + Mono	QLED + Stereo	QLED + Atmos	OLED + Mono	OLED + Stereo	OLED + Atmos
Market Share	13.40%	31.33%	40.79%	16.80%	39.68%	48.41%	21.48%	48.73%	56.59%
Revenue	469'000'000	1'096'550'000	1'427'650'000	588'000'000	1'388'800'000	1'694'350'000	751'800'000	1'705'550'000	1'980'650'000
Costs per phone	200	210	240	220	230	260	240	250	280
Costs	268'000'000	657'930'000	978'960'000	369'600'000	912'640'000	1'258'660'000	515'520'000	1'218'250'000	1'584'520'000
Profit	201'000'000	438'620'000	448'690'000	218'400'000	476'160'000	435'690'000	236'280'000	487'300'000	396'130'000

Based on **First Choice**, we would suggest picking the **OLED** and **Stereo** attributes, that would give a **total profit of 487 '300' 000 \$**.

Expected Profits

$$\text{First Choice}^{*1/2} + \text{Logit}^{*1/2} = 551 \text{ '100' 000}^{*1/2} + 487 \text{ '300' 000}^{*1/2} = 519 \text{ '200' 000 \$}$$

Question 4

From a press release, you learn that your competitor **Apple** will deliver an improved version of its current smartphone at the same price beginning of the next month. The new version has a **60 MP camera**. Assume your competitor **Samsung** will reduce its price by **50\$** as a reaction to this new Apple smartphone. If you could **change only one attribute** of your **base smartphone**, which one would it be to **maximise your profit** in this new market situation?

First Choice

Business Metrics / Features	Base	QLED	OLED	Stereo	Atmos	Dual Sim card	60 MP
Market share	3.41%	4.83%	6.25%	8.24%	18.75%	11.36%	11.65%
Revenue	119'350'000	169'050'000	218'750'000	288'400'000	656'250'000	397'600'000	407'750'000
Cost per phone	200	220	240	210	240	220	260
Costs	68'200'000	106'260'000	150'000'000	173'040'000	450'000'000	249'920'000	302'900'000
Profit	51'150'000	62'790'000	68'750'000	115'360'000	206'250'000	147'680'000	104'850'000

Logit

Business Metrics / Features	Base	QLED	OLED	Stereo	Atmos	Dual Sim card	60 MP
Market share	5.79%	7.33%	10.14%	13.84%	22.11%	12.69%	14.18%
Revenue	202'650'000	256'550'000	354'900'000	484'400'000	773'850'000	444'150'000	496'300'000
Cost per phone	200	220	240	210	240	220	260
Costs	115'800'000	161'260'000	243'360'000	290'640'000	530'640'000	279'180'000	368'680'000
Profit	86'850'000	95'290'000	111'540'000	193'760'000	243'210'000	164'970'000	127'620'000

We would choose from both, **First Choice** and **Logit**, the **Atmos** attribute, which would give the **maximum profit**.

Expected Profits

$$\text{First Choice}^{*1/2} + \text{Logit}^{*1/2} = 206'250'000^{*1/2} + 243'210'000^{*1/2} = 224'730'000\$$$

