Calculate the segment Gross profit

Educational film "Mercado Libre, winning against Amazon in LatAm?"

Dominique JACQUET

DOMINIQUE JACQUET
CADEMY

What is the problem?

- Mercado Libre provides detailed information (revenue and gross profit) by geography and only revenues for commerce vs. fintech during the last 3 years, but no gross profit

- It is quite important to understand the respective contributions of these segments to the total gross profit of the Group

- A (small) mathematical model helps!

Data available?

- Last 3 years 2018 – 20209

- Revenue per segment (commerce vs. fintech)

- Total gross profit

What do we want to calculate?

- Gross profit rate per segment

The method?

- 2 linear equations with 2 unknowns

- Easy to solve

- Check that it works!

The unknowns?

- Fintech gross profit rate ➜ f

- Commerce gross profit rate ➜ c

Back to data

P&L	2020	2019	2018
Commerce	2 559 770	1 346 445	838 632
FinTech	1 413 695	949 869	601 021
Revenue	**3 973 465**	**2 296 314**	**1 439 653**
growth	*73%*	*60%*	*18%*
Cost of revenue	(2 264 255)	(1 194 191)	(742 645)
Gross profit	1 709 210	1 102 123	697 008

Write the equations

- The increase in the total gross profit results from the increase in

  segment revenues multiplied by respective gross margin rates

- Δ Gross profit = f * Δ revenues fintech + c * Δ revenues commerce

- Write for 2020 vs. 2019 and 2019 vs. 2018

Here they are!

- 2020 / 2019: $607 = c * 1{,}213 + f * 464$

- 2019 / 2018: $405 = c *\ \ 508 + f * 349$

- 2020 / 2019:

  - $607 = 1{,}709 - 1{,}102$ (Δ gross profit in $k)

  - $1{,}213 = 2{,}559 - 1{,}346$ (Δ revenue commerce in $k)

  - $464 = 1{,}413 -\ \ 949$ (Δ revenue fintech in $k)

- Idem for 2019 / 2018

Solving!

- c =(607 – f * 464) / 1,213

- 405 = 508 * (607 – f * 464) / 1,213 + f * 349

- 405 = 254 – f * 194 + f* 349

- f = 98% and c = 13% (rounding figures...) *quod erat demonstrandum* 😃

I am sure you loved the calculation!

Checking!

- 2020 / 2019:   612 = 13% * 1,213 + 98% * 464   vs. 607 (+1%)

- 2019 / 2018:   408 = 13% *   508 + 98% * 349   vs. 405 (+1%)

- **<u>Always</u>** check your calculations…

Not that difficult, but very useful...