Managing Data & Databases
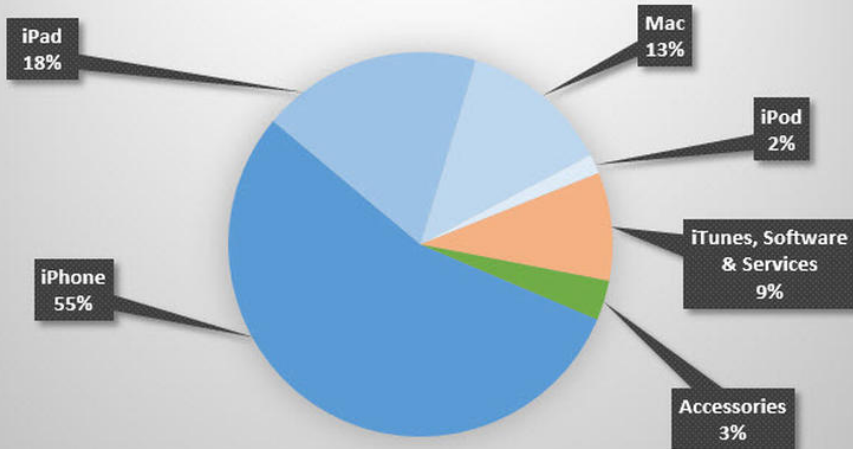
Session 5
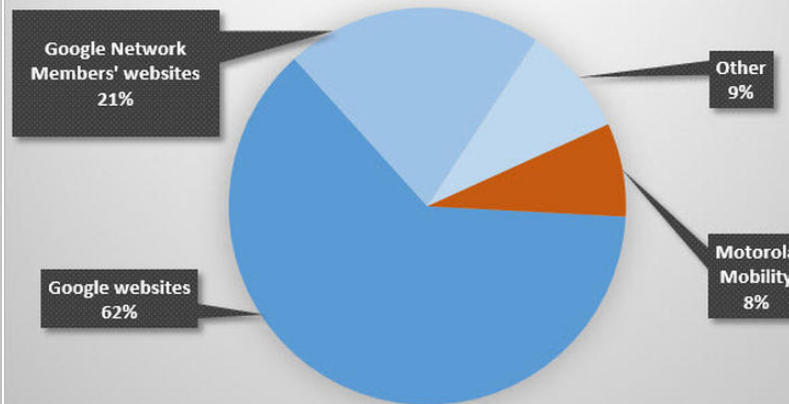Data-driven business models

Does that tell you anything about the products and the conduct of these companies?
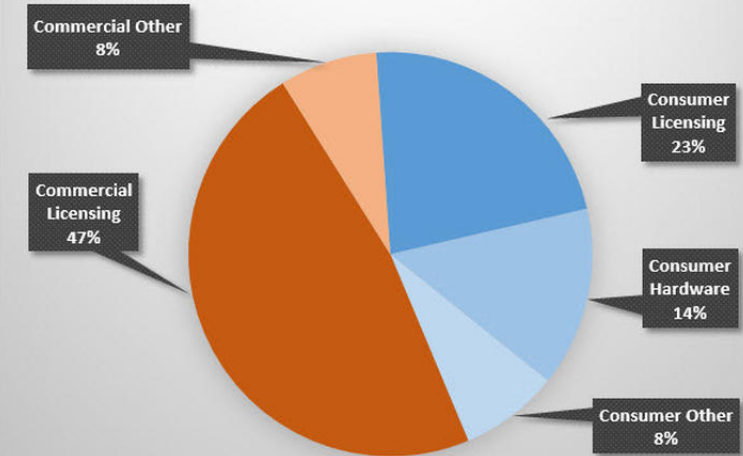
Revenue

In Millions

- Payments and other fees
- Advertising
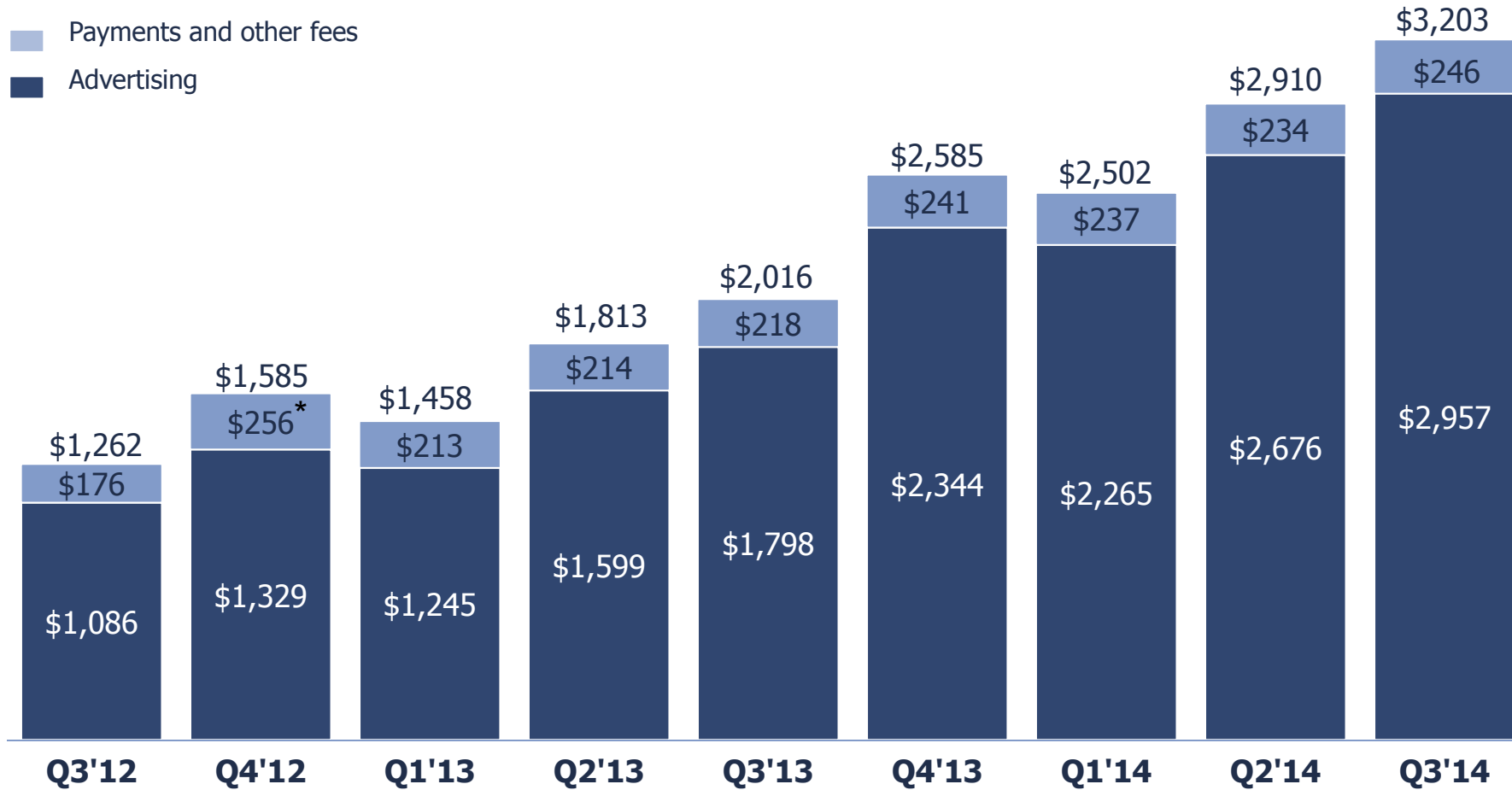
	Q3'12	Q4'12	Q1'13	Q2'13	Q3'13	Q4'13	Q1'14	Q2'14	Q3'14
Total	$1,262	$1,585	$1,458	$1,813	$2,016	$2,585	$2,502	$2,910	$3,203
Payments and other fees	$176	$256*	$213	$214	$218	$241	$237	$234	$246
Advertising	$1,086	$1,329	$1,245	$1,599	$1,798	$2,344	$2,265	$2,676	$2,957

What about this one?

facebook

What is a business model?

- A mediating construct between technology and economic value [*]

- The functions of a business model [*]

  - articulate the value proposition based on the offered technology

  - identify a market segment and a revenue generation mechanism

  - define the structure of the value chain within the firm and determine the complementary assets needed

  - estimate the cost structure and profit potential

  - describe the position of the firm within the value network linking suppliers and the customers

  - formulate the competitive strategy of the firm vis a vis rivals

* Chesbrough, H., & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change, 11*(3), 529–555. doi:10.1093/icc/11.3.529
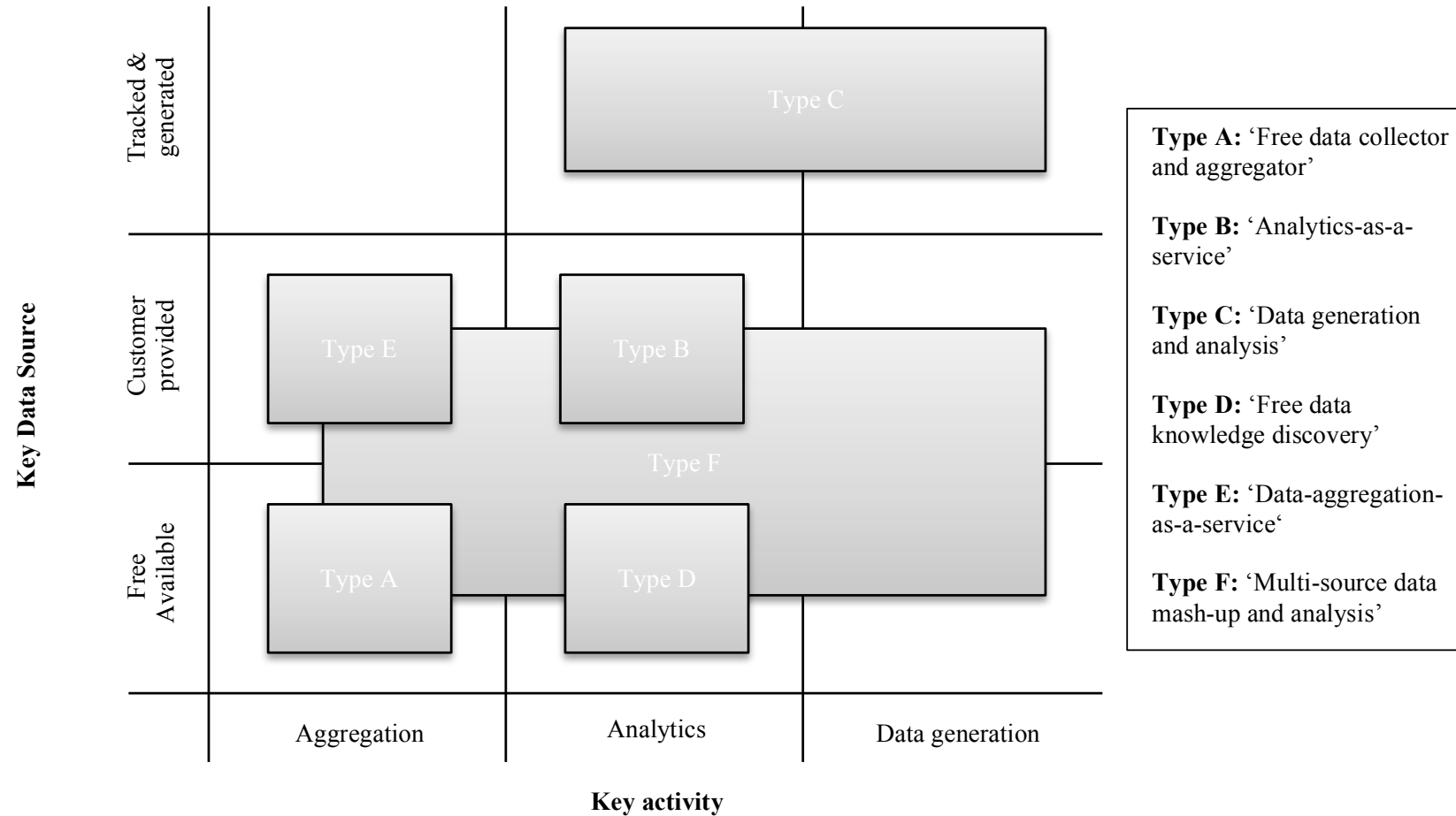
What about in data-driven startups?
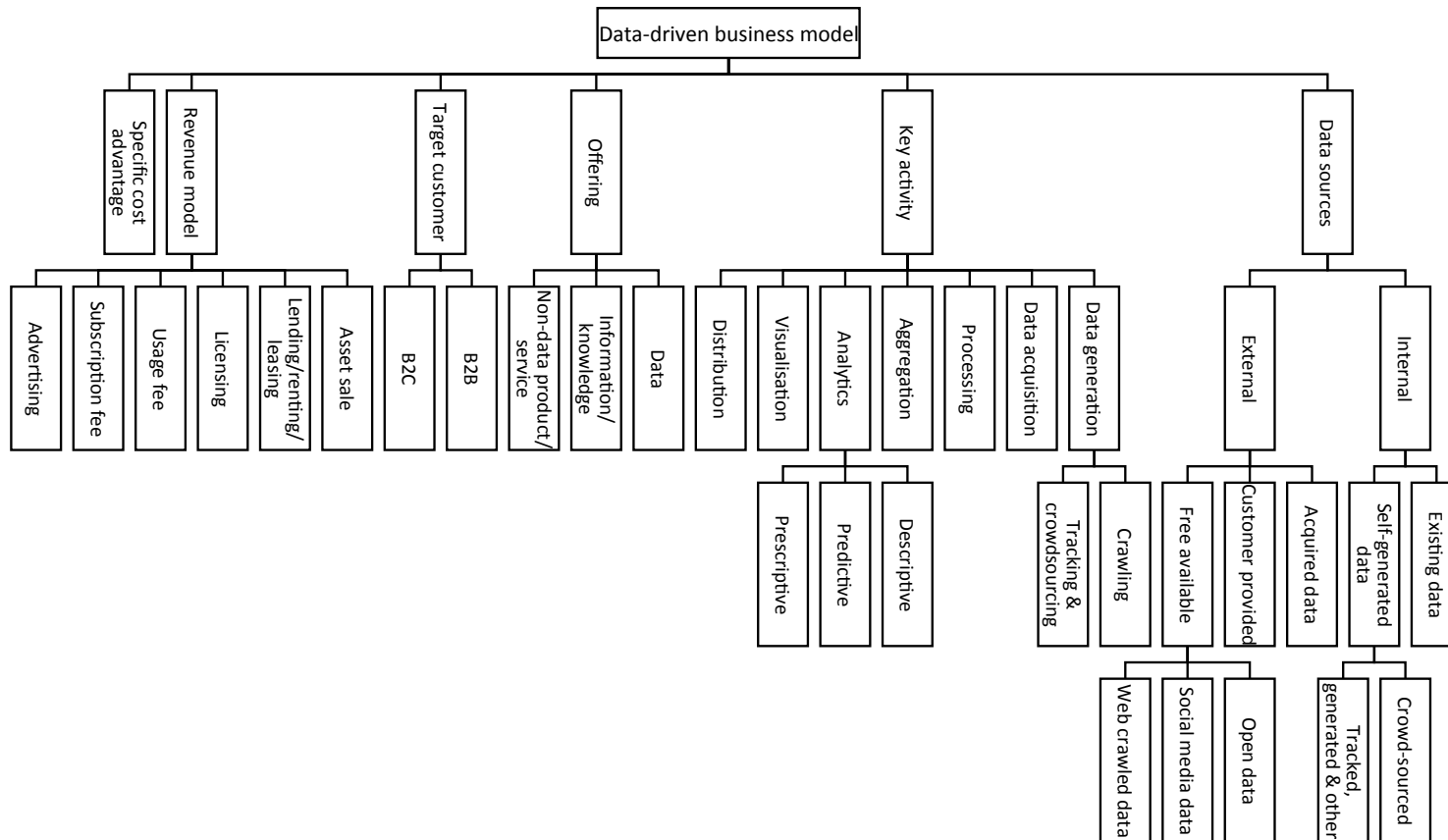
Source: Hartmann, P. M. et al (2014). Big Data for Big Business? A Taxonomy of Data-Driven Business Models Used by Start-Up Firms. *Cambridge Service Alliance working paper.*

DDBM Dimensions				DDBM Cluster Types Percentages					
				A	B	C	D	E	F
				Free data collector and aggregator	Analytics-as-a-service	Data generation and analysis	Free data knowledge discovery	Data-aggregation-as-a-service	Multi-source data mash-up and analysis
Share of companies				18%	29%	17%	15%	6%	15%
Data Source	Internal	Existing data		0%	0%	0%	0%	0%	0%
		Self-generated data	Crowd-sourced	18%	0%	31%	0%	17%	7%
			Tracked, generated and other	6%	11%	88%	0%	0%	21%
	External	Acquired data		12%	11%	0%	7%	0%	21%
		Customer provided		24%	100%	13%	0%	100%	79%
		Free available	Open data	100%	11%	19%	100%	0%	93%
			Social media data	12%	4%	0%	7%	0%	7%
			Web crawled data	71%	11%	13%	50%	0%	57%
Key Activity	Data generation	Crawling		35%	0%	6%	50%	0%	43%
		Tracking & crowdsourcing		12%	4%	100%	0%	17%	29%
	Data acquisition			24%	21%	6%	21%	17%	29%
	Processing			100%	18%	0%	0%	100%	93%
	Aggregation			12%	82%	69%	86%	0%	93%
	Analytics	Descriptive		0%	50%	13%	21%	0%	14%
		Predictive		0%	11%	6%	7%	0%	7%
		Prescriptive		24%	39%	44%	7%	33%	36%
	Visualisation			100%	36%	19%	29%	83%	50%
	Distribution			35%	0%	6%	50%	0%	43%
Offering	Data			12%	0%	0%	0%	0%	14%
	Information/ knowledge			88%	100%	88%	100%	83%	93%
	Non-data product/service			0%	0%	13%	7%	0%	0%
Target Customer	B2B			71%	96%	63%	86%	83%	86%
	B2C			47%	18%	50%	21%	33%	21%
Revenue Model	Asset Sale			0%	0%	19%	0%	0%	0%
	Lending/renting/leasing			6%	0%	0%	0%	0%	0%
	Licensing			0%	0%	0%	0%	0%	0%
	Usage fee			12%	14%	13%	21%	0%	0%
	Subscription fee			47%	46%	44%	64%	33%	36%
	Advertising			12%	0%	6%	7%	0%	7%

Anything surprising? Important? Interesting?

Source: Hartmann, P. M. et al (2014). Big Data for Big Business? A Taxonomy of Data-Driven Business Models Used by Start-Up Firms. *Cambridge Service Alliance working paper*.

A DDBM Matrix

Key Data Source (vertical axis): Tracked & generated · Customer provided · Free Available

Key activity (horizontal axis): Aggregation · Analytics · Data generation

Type A · Type B · Type C · Type D · Type E · Type F

Type A: 'Free data collector and aggregator'

Type B: 'Analytics-as-a-service'

Type C: 'Data generation and analysis'

Type D: 'Free data knowledge discovery'

Type E: 'Data-aggregation-as-a-service'

Type F: 'Multi-source data mash-up and analysis'

Exercise

What data-driven business model gets you top funding?

Reference: https://www.crunchbase.com/funding-rounds