The Gross Margin Problem: Lessons for Tech-Enabled Startups

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Software startups never had to worry about COGS; tech-enabled startups do.

The topic du jour in tech right now is the sudden reappraisal of some high-flying startups based on unit economics / gross margins (e.g. WeWork, Uber, Lyft, DoorDash, Postmates, etc).

How did we get here? The truth is that software startups never had to worry about gross margins until software started eating the world. Gross margins only became a concern once software blended with physical-world products and services to create new tech-enabled business models.

Historically, pure software businesses had perfect gross margins. All the major expense was in creating the first copy; subsequent copies were virtually free. The realization that he could sell cheap mass-market software and make it up in volume made Bill Gates the richest man in the world.

When software moved to the cloud, this dynamic didn't change. Almost all of the production cost is in creating the product for the first user. Aside from hosting, it is almost free (on an incremental basis) to provision additional users. If anything, the cloud perfected the software business model by making revenue recurring.

As a result, early-stage software startups never needed to have much proficiency in cost accounting. They didn't really need to know which expenses were overhead versus COGS. They just needed to know their burn and runway.

Similarly, software companies didn't need to be world-class at driving operational efficiency. There just weren't that many unit costs to optimize. And the enormous operating leverage allowed the most successful software companies to be quite lavish in their spending. Hence the Google chefs, Kind bars, and Disneyland-style campuses. Margins were still amazing.

But when software started eating the world, everything changed. Software was just one component of the service being offered. Software might be the disruptive element but it wasn't the source of unit economics. These new "tech-enabled" businesses had major COGS (e.g. leases at WeWork; drivers at Uber).

The new tech-enabled startups had cost structures more similar to the companies they were disrupting (e.g. commercial landlords; the taxicab industry) but they still thought like software companies. Good for innovation, bad for operational efficiency.

Although growth solves many problems at startups, unit economics is not one of them. When you're losing money on every transaction, you can't make it up in volume. In fact, the more revenue that a businesses with negative unit economics generates, the more money it loses.

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As a result, there is now a painful readjustment happening as many of these companies try to fix unit economics and bring their cost structures in line. Valuations are similarly being reappraised as investors see through top-line growth that was achieved at the expense of negative unit economics.

So what are the lessons if you’re a tech-enabled startup — one whose product has a meaningful physical-world component?

1) First, you’re going to need a proficiency in cost attribution from the beginning. You’ll need to know your unit costs at a much more detailed level than a typical SaaS startup (which doesn’t have meaningful COGS).

Attribution can be harder than it sounds in the early days of a startup when the finance function is immature. COGS are not typically purchased in units; they’re often bought in larger chunks and unitized based on assumptions that must be verified.

Which costs are one-time and which are ongoing, which are temporarily inflated and which can be brought down with scale, are important to understand. Insights about improvements must be operationalized and measured in a continuous feedback loop.

2) Second, you’re going to have to pay a lot more attention to pricing. In a typical SaaS startup, the goal is just to get over the “penny gap” — prove that there is willingness to pay for the new product and then increase pricing over time.

Tech-enabled startups can’t quite do that because product-market fit based on an artificially low price point could be an illusion. This is the old problem of selling dollar bills for 90 cents — you will appear to have a thriving business. Raise the price to $1.10 and you will see that you have no business.

Startups that are “temporarily” using VC money to subsidize negative contribution margins must always have anxiety about the true quality of their product-market fit and eventual market size. Would they still have a big business if they raised prices to a sustainable level?

As an investor, I like these businesses to prove from the outset that unit economics are positive, even if marginally so, and then show how they can improve contribution over time with greater scale and operational efficiency.

Note that these businesses are still going to lose a lot of money in the early days. But the question is what kind of money are they losing? Losing money at the corporate level is ok (all startups do); losing money at the unit level is not.

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3) Third, you should prioritize 0 to 1 problems like establishing positive unit economics and a culture valuing operational excellence before going from 1 to N. Get the operation working at small scale, in one geo, with the right teamwork and culture, before expanding into lots of markets.

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Competitive pressure often makes founders feel that they must prematurely scale. For example, what do you do if you're only at "0.5" but a competitor could beat you to a growth round if you wait to get the unit economics right?

In the past, the balance of risks dictated that founders win the market first and then figure out everything else later. But that calculus may be changing if investors are no longer willing to fund growth based on questionable unit economics.

The public market's verdict on WeWork and other gross margin-challenged companies has trickled down to growth and venture investors. Growth capital has seemingly tightened overnight. Winter is here. Founders should plan to be contribution margin positive by the time they raise growth capital — or at least be close to it, with a highly credible plan to get the rest of the way. Founders can no longer depend on an endless spigot of funding to defer tough business decisions.

Frankly, this is not a bad development for our industry or for founders who want to build real businesses.

Startup Gross Margin Unit Economics Venture Capital Growth Strategy