



The Trouble with Cobots

When it comes to cobots, haven't we all been reading stuff about cobot sales being low for years now? Like this from GlobalNews: "Collaborative Robots or Cobots have been in existence for the last ten years but account for less than 5% of the industrial robot market. However, the adoption of cobots is likely to see accelerated growth in the next five years."

One forecaster says: the collaborative robot/cobot is projected to grow from \$1.2 billion in 2021 to \$10.5 billion by 2027; it is expected to grow at a Compound Annual Growth Rate (CAGR) of 43.4% from 2021 to 2027.

Such news commentary and forecasts have been intriguing me for a long time.

So, what's the expectation that forecasters are exhibiting that's not being realized in the data of the actual sales of cobots?

I went looking for a connection...and here's what I found.

Low-hanging fruit?

For the cobot industry, are all the easy sales long gone? The proverbial low-hanging fruit? The easy sales may all be in the rearview mirror, two years back. Big corporations, especially the auto industry, have been sold, as have the early adopters, as have well-financed startups or anyone else with cobots baked into their design specifications.

Cobot sales seem to be sliding sideways on the alert for the next tree with low-hanging fruit.

Now comes the hard part: selling everyone else. The everyone else is essentially small-to-medium enterprises (SMEs) with 500 or fewer employees, 75 percent of which have 20 or fewer employees. Those SMEs “represent [98 percent of all manufacturing establishments in the United States](#), and they employ 43 percent of all manufacturing workers [approximately [5 million](#)].” According to the Small Business Administration, these small manufacturers number over [600,000](#).

This is the vast addressable market for which the creators of the cobot originally built their new tool. An affordable workmate that would revolutionize manufacturing, accelerate productivity and democratize robotics for everyone.

The cobot proved to be all of that and more.

Word of this new tool, however, has never dispersed well enough to its intended SME audience. As the former CEO of Universal Robots, Jürgen von Hollen, remarked: Cobot is not a household name with many. Barely 10 percent of the addressable market knows anything about cobots.

When in 2020, [MIT researchers visited SME factories](#) in Ohio, Massachusetts, and Arizona, they were surprised to find no cobots in any. In fact, there were very few industrial robots of any kind: “Indeed, even in the large firms (with over 500 workers) we visited, [robots were scarce](#).”

Seems that if you don’t attend tradeshow, events or some sort of robot convention, as is the case with most SMEs, chances are you missed the memo about cobots. SMEs were not the low-hanging fruit when it came to cobot sales. But now, with the low-hanging fruit long gone, SMEs may well be the only fruit.

[When the researchers asked SMEs](#) how they generally came to know about new robotics systems, most replied that integrators were the conduit, but admitted that they didn’t like dealing with integrators.

“When we asked companies that had bought robots or that were considering a purchase about working with integrators, the comments were mostly negative. Sharing company information with an integrator raises fears of losing intellectual property.

“One CEO who had experience with trying to work with an integrator claimed that integrators sell their services by telling your competitor how they solved your problems.”

True or not, such answers were found to be consistent from Massachusetts to Ohio to Arizona.

Admittedly, there’s a universe of difference between selling multiple cobot units to a large corporate customer rather than onesie-twosie sales made to much smaller SMEs; a salesman’s preference in such a choice is obvious. For example, KUKA landing an order from BMW for 5,000 industrial robots (May 2020) was a dream sale!

However, if offloading onesie-twosie cobot sales to an integrator is standard operating procedure in the cobot industry, then there appears to be potentially significant problems with SME bias.

Then too, price, the researchers found, was the major pain point for SMEs. If any had a big enough contract to cover such a purchase, then they would consider buying. However, the purchase price was not the only cost to bear.

“We heard during the interviews,” reported the researchers, “that the purchase price of a robot is only about [a quarter of the total cost of installing a robot](#), a figure confirmed for us by Tom Ryden, executive director of MassRobotics.”

A picture appears to be developing that casts SMEs as a vast underserved majority that the robot/cobot industry has in the past and continues to overlook.

All of which puts lots of validity to the IFR’s figures that cobot sales are only a puny 5% of all industrial robots.

Universal Robots (UR), by far the leader in cobot sales worldwide, readily acknowledges the oversight. In an interview with [Automation World](#), Joe Campbell, senior manager of applications development at Universal Robots, admitted as much, saying: "There's a large chunk of the market that's really been underserved by the whole automation community, and we continue to uncover every week more and more [SMEs] that have very little automation, if any.”

It's way more than a "large chunk of the market"; it is the market! SMEs are "98 percent of all manufacturing establishments in the United States". How could UR overlook the gorilla in the room? It's way more than uncovering SMEs as if they are outbreaks of COVID: "We continue to uncover every week more and more [SMEs] that have very little automation, if any."

Why did it take UR ten years to "uncover" that nugget of SME need: "They have no robots, and so that's a big growth area going forward."?

So, why is all of that important?

SMEs not taking part in automation upgrades and the use of robotics, according to the research group's report, [MIT Task Force of the Work of the Future](#), is a major brake on the country's productivity growth; there is a "widening productivity gap between large manufacturing firms and small and mid-sized manufacturing firms."

"In the early 1970s, the productivity (measured in shipments per employee) of large manufacturing establishments—plants with over 500 workers—was only about 22 percent higher than in plants with fewer than 500 workers.

"By 2012, revenues per employee at plants with more than 500 workers were 96 percent higher than those at smaller plants.

"Trying to explain slow productivity growth in SMEs and what appears to be their worsening relative performance seems a critical step in understanding the future prospects of U.S. manufacturing.

"When, why, and how manufacturing firms acquire new technology; how they find or train workers with new skills—these issues are central to figuring out why productivity lags in smaller companies."

Speaking of impacts, what about all the suppliers of cobot accessories—the grippers, the vision systems, the safety devices, etc.? How much more could they have sold if the cobot industry had reached out to SMEs more vigorously?

Going forward, what's the solution? Cobot and robot rentals?

[Reuters recently reported](#) that there's a new movement afoot to get small companies into the automation flow: the rent-a-robot model. Silicon Valley has awakened to the reality of it all: "Better technology and the need to pay higher wages to humans have produced a surge in sales of robots to big companies all across America. But few of these automatons are making it into smaller factories, which are wary of big upfront costs and lacking robot engineering talent.

"So, venture capitalists are backing a new financial model: lease robots, install and maintain them, charge factories by the hour or month, cut the risk and initial costs."

Millions of investment dollars have recently been poured into this new model for doing business with SMEs. Of course, rentals have been tried in the past: Matt Bush and Bob Goldiez pioneered the rental model back in 2016, with their then refreshingly different company [Hirebotics](#).

"We fundamentally believe [most companies shouldn't own robots](#) just like they don't own servers in the IT space," says Rob Goldiez, the company's co-founder and CEO. "Hirebotics is a good fit when the customer doesn't have experience in automation in house or their automation teams are just too busy and don't have time to support another project. If there's a problem in the middle of the day or night, Hirebotics is on the hook to deliver support."

Hey you?

Of course, whether it's rentals, leases, or sales, the industry still needs to somehow first engage with SMEs, get their attention and buy-in that the industry cares about them. The "Hey you, can we talk" ice breaker moments that seem so much needed. After a decade or more of neglect, that might be a difficult chore.

Does the cobot industry, after the myopia of selling cobots from tradeshow booths and through third-party integrators, know how to prospect for, engage with, and sell cobots to SMEs? Moreover, is the cobot industry willing to put in the effort into onesie-tvosie selling to SMEs?

One thing is for sure

If the cobot is indeed a revolution in robotics as well as a new paradigm in the relationship between people and their machines, then just maybe there's a need for a new paradigm in ways to sell, rent or lease these new tools to the greatest number of those in need.

Try this one on for size

Here's an intriguing new look at selling cobot gear: **What about Hyundai?** Hyundai Robotics has its new YL cobot series in the marketplace, and they're pretty good machines. What if Hyundai decided to sell its cobots through its auto dealerships? Like maybe two cobots on display per showroom. Sure, they are differing parts of the Hyundai conglomerate, but still, we're talking new paradigms, right?

Hyundai Motors operates in 192 countries and has over 5,000 showrooms worldwide. That's a lot of selling space, and familiar, neighborhood space for any SME to visit.

Every TV station in the world would do a piece on that uniquely newsworthy selling event. That's millions of dollars in free advertising.

Plus, SMEs who pay a visit for a demo might just also drive away with a new Hyundai Sante Fe.

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