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## Where's The Fabric For Masks And Gowns?

William Baldwin

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Ever since the virus hit Wuhan, Berry Global, manufacturer of the fabrics needed for medical barriers, has been scrambling.

Berry has persuaded customers in the bedding and furniture industries to defer orders so that it can focus on medical needs. The company pivoted a new \$70 million factory investment in Nanhai, China, from supplying electronics companies to supplying mask makers. It is about to turn a test-run operation in Waynesboro, Virginia, into a production line that would produce enough filtering fabric for 400,000 masks a day. It has engineers tinkering with similar equipment in Old Hickory, Tennessee, to get the same result. It has resurrected a decommissioned fabric line. "We're leaving no stone unturned," says Thomas Salmon, Berry's chief executive.

Good. Not good enough.

The U.S. could use a billion N95 masks, preferably delivered tomorrow. Then citizens would have masks, as they did in Wuhan, and doctors would not have to bring bandannas to work.

The marketplace is responding to the crisis in medical supplies, with new manufacturers of masks and ventilators cropping up. But this response is agonizingly slow, and, as New York Governor Andrew Cuomo has said, it leaves desperate buyers bidding against one another for limited supplies.

The problem is partly one of manufacturing bottlenecks. Factories are not built in a day. But it's equally one of economics. No business wants to pay for machinery that will be used for three months and then sit idle.

I recently explored the two parts of this problem with both Salmon and Arnold Kling, an economist with a creative answer to the financial dilemma.

Consider, first, a precedent for emergency production. In 1941 Ford Motor and the U.S. government signed a cost-plus-fixed-fee contract to make B-24 bombers. The government paid for the Willow Run factory near Ypsilanti, Michigan, and leased it to Ford. At the end of the war Ford was free to walk away from the asset. Which it did.

Salmon has six U.S. plants that make either fabrics or films that go into masks, protective gowns, surgical drapes and antiseptic wipes. All these are relevant to the current war effort, but there is one weapon against coronavirus that is in crucially short supply: meltblown polypropylene.

To make this stuff, a very expensive machine melts pellets of poly and ejects the liquid through tiny holes, making micron-size threads. When those threads congeal they turn into a featherweight nonwoven fabric that can trap microscopic dust particles and droplets. Sandwich a layer of this gossamer between two layers of more ordinary fabric and you have the makings of an N95 face mask, breathable but protective.

Berry has two meltblown lines at a Biesheim, France, factory, but all of their output is going into the European market. Its Nanhai factory cranks out meltblown, but the Chinese market has until recently swallowed all of it.

What about buying another meltblown machine to be installed in the U.S.?

It would be a long time coming, says Salmon. He points to a \$50 million line Berry recently added in Mooresville, North Carolina, for the production of fabric for disinfectant wipes. That project started long before the virus emerged. It took a year.

Projects that take a year in normal times take less in an emergency. There are two big European manufacturers of machinery to make nonwoven plastic fabrics: Reifenhäuser Reicofil, a family-owned firm in Troisdorf, Germany, and Oerlikon, a publicly traded outfit near Zurich. A few days ago Reifenhäuser announced that it cut the lead time for a meltblown machine to three and a half months.

Output arriving in the summer comes too late to cure the immediate shortage of protective gear in New York. But it could address mask needs in other states, or help with a second wave of the epidemic, if that occurs. A machine blowing 550 tons of poly per year would produce the fabric for 1.8 million masks a day.

Perhaps a premium price would elicit still greater speed. Pay the machinery maker double, and that company can afford to pay all its subcontractors double for expedited delivery.

But who foots the bill for a rush order? In a purely market-driven economy, the fabric maker would pay a surcharge for the machine and then charge extra, in turn, to recover its costs. But companies, especially public ones, are reluctant to step into this minefield. They can't afford to be thought of as price gougers.

It is noteworthy that investors do not see any winning maneuver for Berry, or, for that matter, Oerlikon. So far this year shares in both of these companies have done worse than the overall U.S. stock market. (The diversified plastics manufacturer Berry makes, besides medical raw materials, retail food containers—but, with restaurants shuttered, those should be selling well.)

For a solution we turn to Arnold Kling, an economist and adjunct scholar at the libertarian Cato Institute. Libertarians are not fans of government expansion, but the landscape looks different in wartime. Kling offers a variation on the Willow Run contract.

Have the government pay for the fight against the virus, Kling says, by having it take bids on a contract that covers both fabric and fabric-making capacity. When the crisis is over, the

government would have a fabric plant on its hands. “That plant has value to us,” he says. “Five years from now we might want to raise production.”

But the acquired plants don’t have to sit idle. While waiting for the next epidemic, the government could lease them back to manufacturers interested in reconfiguring the machines to make fabric for whatever market they were supplying before the crisis started.

Don’t hold your breath waiting for any such creativity from the federal government. It is, for now, taking a hands-off approach to the medical supply chain. Things are going to get pretty ugly in New York City.