The Real Innovation Impact of the Dow-DuPont Merger

by Tony Ceccoli and George Young

“This is the way the world ends
Not with a bang but a whimper.”
? T.S. Eliot

The Dow Chemical and DuPont merger has many doomsayers lamenting about the “death of American research and development.” But it’s not that stark, and it’s not that black and white.

Yes, the closure of DuPont Central Research – and layoff of much of its prestigious staff – is a blow to American innovation. And yes, mergers like this that are focused more on short-term financial returns than building sustainable research and development capabilities, will most certainly lead to a decline in R&D as we know it. But just as in life, things were bound to change, and the ultimate impact on chemical innovation for the US really depends on what happens post-merger.

The Downsides and Upsides for Chemical Innovation

The merger and anticipated subsequent break up into three market-focused entities will cause turmoil in chemical innovation. There will be a short term disruption to innovation as Dow and DuPont converge and then diverge.

These measures may have a positive impact on the near term bottom line, and in the long term, are also expected to yield higher return to shareholders of the new independent companies.

DuPont’s revenue from new products has historically been 30-32% of their overall topline. Industry peers like 3M are documented to be in the same range and seeking to be even higher. Alternatively, Dow’s revenue from new products has been much lower. If the three new companies are built on a foundation of spending a lower percentage of revenue on R&D, they will realize a lower percentage of revenue from new products than the old DuPont or their competition. And as products are gradually commoditized, they will provide much lower profitability and very little ground breaking new platform innovation.

The upside here is that the three companies will be more customer-driven, as they are loosely organized around agricultural chemicals, material science, and specialty chemicals & products. Company leaders say that by breaking up they will be leaner, less bureaucratic, and more able to deliver customer-driven innovation. With a customer-driven approach, new innovations will be more profitable and meaningful to their customers. This will be good in the short term for both shareholders and customers.
But a customer-driven approach alone will not provide long-term profitability. There are three common innovation strategies in the chemical industry.

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<th>Strategy</th>
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<th>Pros and Cons</th>
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<td>Maintenance Innovation</td>
<td>Maintain current product lines – Company spends little on new product development and focuses on smaller customer requests to modify existing products</td>
<td>Short-term profitability Long-term erosion of profitability and revenue</td>
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<td>Customer-Based Innovation</td>
<td>Drive customer-specific innovation through an intimacy model – Company focuses on requirements of largest customers and does little to look at new platforms or new market opportunities</td>
<td>Short-term profitability Better long-term profit and revenue, but customer drives innovation process Customer can force profit and revenue down by bringing in competition Risk that the nature of market can shift to drastically reduce market share of customer</td>
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<td>Balanced Innovation</td>
<td>Combine platform opportunities, customer-driven innovation and portfolio maintenance – Includes longer term research into new molecules and formulations, new applications and platforms that serve multiple needs</td>
<td>Sustainable longer-term profit with some shorter-term profit</td>
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For the three companies to be sustainable, they must seek a balanced innovation mix with long-term investment and research into new molecules and formulations, new applications, and platforms that serve multiple needs.

The Downsides and Upsides for R&D Chemical Professionals

Previously, Dow spent 3% of annual revenue in research and development, and DuPont spent 7%. Estimates for the combined entity will probably be closer to the 3-4% range. Of course, much of this cost is staff. As activist investors apply pressure to employ cost reduction measures, R&D takes a hit. Some projections suggest a 30% reduction in the R&D workforce for DuPont.

This will bring an unprecedented availability of chemical innovators to the market. In the wake of uncertainty, some of these talented professionals may look outside their existing companies. If these very experienced professionals join nimble, forward-thinking chemical startups, this could inject strong innovation into the US chemical industry.

For those that remain as part of one of the three Dow/DuPont companies, the customer-focused approach should lead to greater job security and longevity. But the adoption of a balanced innovation approach will be critical for the companies to achieve their market objectives, keep the current workforce employed for the long-term, and maybe even generate new opportunities for people.

Another interesting point – some sources say that China is producing scientists and engineers at 150% greater rate than America, and that Chinese chemical manufacturers seek to increase R&D spending as they move into less commodity and more specialty products. As other countries invest, the U.S will be less and less able to compete with the talent and R&D strength.

The Bottom Line for Chemical Innovation

There are two likely outcomes for this merger and divestiture. If the three companies adopt a maintenance innovation approach, spending little to develop new platforms or markets) long-term results will suffer and the doomsayers may be proven right. On the bright side, smaller specialty companies and other competitors will have a window for innovation (and greater access to a very skilled work force) that they can leverage for excellent new growth opportunities.

The other possible scenario is that the new companies will be smaller, leaner, and more ready for a true balanced innovation approach. These companies may now have the capability to do some innovation projects that were previously slowed by bureaucracy and overly complex product development processes. It is possible that in this scenario, we will see a rebirth of innovation in these more focused and nimble companies.

All chemical companies should strive for a balanced innovation approach. This allows them to continually produce innovative, high-profit products that allow for long-term growth. There is risk in betting the future on all new platform or new market opportunities, because it is untested or even unknown ground. However, a truly balanced innovation approach helps executives to better manage the future.

So, does this merger really mark the death of R&D in America? Probably not, but it is another nail in the coffin. As T. S. Elliott says in his poem The Hollow Men – “This is the way the world ends, not with a bang but a whimper.”
What's your view? Add your question or comment
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