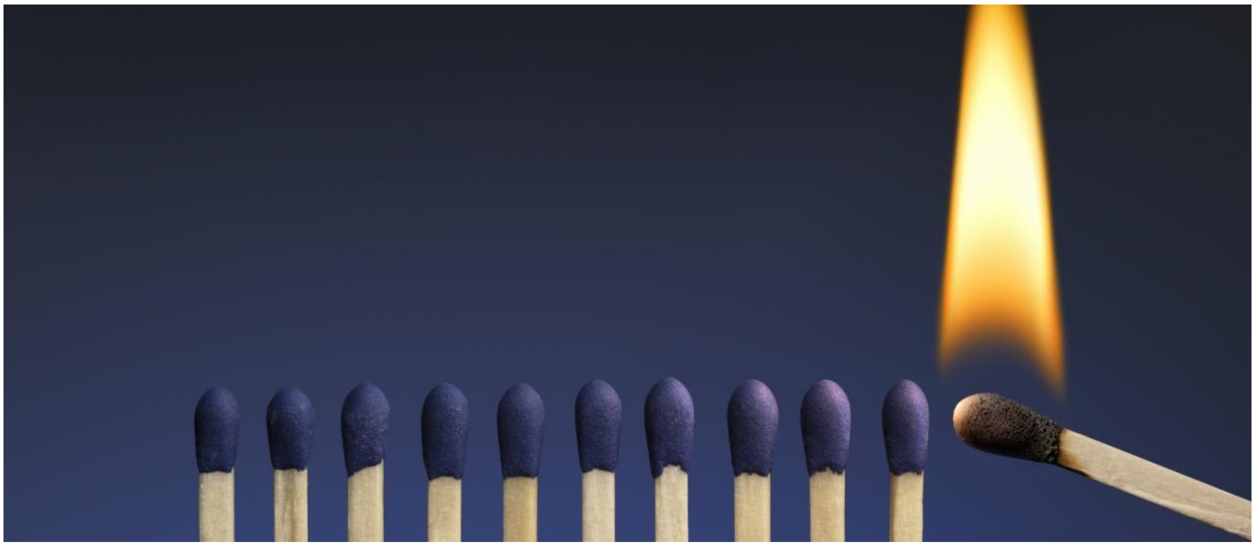
How the Volkswagen Scandal Turned ‘Made in Germany’ Into a Liability



By Dimitrije Ruzic , INSEAD

Firms that leverage a collective reputation for marketing purposes should never lose sight of the fact that one bad apple can spoil the barrel.

In the wake of the Volkswagen (VW) emissions scandal, the media were quick to wonder just **how much damage** had been inflicted on the “Made in Germany” image. Dubbed Dieselgate or Emissionsgate, the scandal saw VW admit that it had cheated on lab emissions testing for years, making its diesel cars appear up to 40 times less polluting than they actually were.

While the damage done to German firms has yet to be fully quantified across all markets and industries, research by my co-authors* and I suggests that, by virtue of their collective reputation, the German carmakers that played no part in the scandal lost sales worth billions of dollars in the United States alone.

Altogether, we estimate that the VW scandal reduced the US sales of BMW, Mercedes-Benz and Smart – the non-VW German carmakers present in the

US – by about 105,000 vehicles worth US$5.2 billion (based on the list prices), in the 12 months following the scandal that erupted in September 2015.

A brief timeline of Dieselgate

- In May 2014, US university researchers found discrepancies between on-road emissions of VW diesel vehicles and official lab results.
- The US Environmental Protection Agency (EPA) and the California Air Resources Board conducted further testing, which showed that VW diesel vehicles were largely exceeding emissions limits. VW then admitted it had used engine software to rig results.
- On 19 September 2015, international media broke the scandal.

In our working paper, **“Firms and Collective Reputation: a Study of the Volkswagen Emissions Scandal”**, we describe how we derived our estimates through extensive computer modelling of light vehicle sales data in the US from January 2010 to August 2016.

Our analysis, which also built on direct evidence from internet search behaviour and consumer sentiment, revealed three main forces at play.

1. The VW scandal led many consumers to shun VW specifically.

In itself, this development was good news for all automakers, save for VW, of course. In 2014, the year before the scandal, Germany was by far the largest vehicle exporter in the world, with a 22.7 percent market share in dollars, according to **UN Comtrade**. For the most part, consumers put off by the carmaker’s actions but still in need of a car had to turn to alternatives. This drove sales disproportionately towards other German automakers because their vehicles are closer substitutes for VWs than non-German vehicles. We estimated that non-VW German carmakers gained sales of about US$22 billion as a result of this exodus away from VW.

2. Some consumers lost interest in diesel vehicles.

We found a decrease in consumers’ taste for diesel vehicles. Since BMW and Mercedes-Benz continued to sell such vehicles after the scandal, this force was to their detriment. In our model, this effect led to non-VW German carmakers losing US$0.7 billion in sales.

3. In a spillover effect, many consumers decided to stay away from all German automakers due to their collective reputation.

This negative force was the strongest of the three. The scandal’s adverse spillover lowered sales individually for BMW, Mercedes-Benz and Smart. According to our estimates, non-VW German automakers lost sales to the tune of US$26.5 billion due to this adverse effect.

Analysis of Twitter sentiment showed that consumers’ perceptions of non-VW German carmakers dimmed in the aftermath of the scandal. Specifically, Dieselgate led to a drop in positive Twitter sentiment for these firms, while the level of negative sentiment remained stable vs. the baseline. By contrast, negative Twitter sentiment spiked for VW post-scandal, consistent with the strong negative reaction that wrongdoing typically elicits. In sum, the public largely understood that the scandal was limited to VW, but nevertheless grew lukewarm about the other German carmakers, supporting the notion of a collective reputation.

Implications

VW paid US$15 billion in fines as part of a civil settlement in the US. Investors continue to suffer four years later as the stock price is still nowhere near its pre-scandal high of early 2015. Of course, the public also paid dearly: **Dutch researchers** valued the health damage caused by the VW fraud at US$39 billion, or 45,000 disability-adjusted life-years due to the added pollution created by the rigged diesel cars. Our paper provides new empirical evidence that the theoretical notion of **collective reputation** does indeed exist. By sheer association, unwitting members of a group united by a collective reputation can suffer massively from the actions of a rogue element.

Germany manufacturers have historically leveraged the broader reputation of “German engineering” in their advertising and marketing. For instance, a VW commercial from 2014 stated: “Everyone knows that the best cars in the world come from Germany”, concluding “Isn’t it time for German engineering?” Whether explicitly or implicitly, **Mercedes-Benz**, BMW and **Smart** have, too, relied on this association of quality deeply ingrained in the minds of consumers.

From a practitioner’s perspective, it’s important to think about the existence of collective reputations as they can have hefty consequences for individual firms, even if the firm itself does absolutely nothing wrong. For example, national chambers of commerce will often help companies enter markets through marketing campaigns leveraging a collective, often country-specific branding. While such alliances have visible upsides, disregarding the potential downsides could prove costly. The longer a firm has been sharing a collective reputation, the more it should have a plan to handle the fallout should things turn sour.

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About the research

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