

THE EMBEDDED MARKET · CHAPTER FIVE

Two Carmakers and Their Suppliers

Chapter Five of The Embedded Market

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A NOTE BEFORE YOU READ

This work is offered for education and leadership development. It is not legal, financial, accounting, investment, medical or psychological advice; take the advice of a qualified professional who knows your circumstances. Companies and events are described from the public record as the author understands it; characterisations are the author's analysis. Examples are illustrative, and no particular outcome is promised to any reader.

ABSTRACT

Somewhere in a car's development there is always a part that does not quite fit. A bracket is a millimetre off. A seal wears faster than the specification predicted. A component that was cheap to make in the design is expensive to make at volume. The engineers at the supplier usually see it first, because they are the ones making it. What happens next is the whole subject of this chapter. In one kind of relationship, the supplier's engineer picks up the phone to the carmaker's engineer, they talk it through, and the design changes before the problem reaches a customer. In another, the supplier says nothing, because raising a problem is likely to be heard as an excuse, or as an opening for the carmaker to demand a lower price, and because the contract will be put out to bid again next year anyway. The part goes into production as it is, and the problem surfaces later, at a greater cost, in someone else's budget.

CHAPTER FIVE

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A part that does not quite fit

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The first relationship is voice. The second is a relationship in which the only signal left is exit: the supplier quietly stops investing, or the carmaker changes supplier when the problems become visible. This chapter works the difference through one of the best documented public cases in modern industry. The figures come from published research, and each one names its source. Where the research cannot show something, the chapter says so.

The figure

In a 2014 paper in the *Journal of Economic Perspectives*, the economists Susan Helper and Rebecca Henderson set out the scale of what happened to General Motors. The company had once been regarded as the best-managed firm in the world. Between 1980 and 2009, they write, GM's share of the United States market fell from 46 to 20 per cent, and in 2009 the firm went bankrupt.[22]

The usual explanation for the decline is cost: high legacy pension and healthcare obligations to retired workers that competitors did not carry. Helper and Henderson do not dismiss those costs. They argue that the explanation is seriously incomplete. GM's share collapsed, in their account, for many of the same reasons that other dominant American firms of the 1960s lost their markets: a failure to understand the nature of the competition it faced, and an inability to respond effectively once it did. At the centre of that failure they place one thing in particular. GM had great difficulty building the relational contracts that modern design and manufacturing depend on.[22]

A relational contract, in the economists' sense, is an agreement that cannot be fully written down. It rests on both parties' shared understanding of what each will do in situations the written contract does not cover, and on their trust that the other will keep to it. It is, in the language of this book, an embedded relationship. It is where voice lives.

Two ways of buying a part

Helper and Henderson's working paper, the longer version of the journal article, sets out what the two kinds of buying looked like in practice.[22] American carmakers' relationships with outside suppliers from the 1950s to the early 1990s, they write, were characterised by short-term contracts, usually of one year, arm's-length relationships, and a reliance on as many as six to eight suppliers per part. Purchase decisions were driven overwhelmingly by price and governed by written contracts that specified the part precisely. There was little communication between suppliers and the engineers who designed the parts or the plants that used them. They quote a senior GM purchasing manager, speaking in 1993, in an unpublished interview with Helper: "GM doesn't need to understand the technologies that our suppliers use—we let the market tell us."

That sentence is the whole of chapter 2. A firm that lets the market tell it has chosen exit as its only signal.

The Japanese carmakers, in the same account, did something different. They entered long-term relationships and were much less likely to switch suppliers over small differences in quoted price. For many parts they specified only the exterior dimensions and the performance required, and let a specialist supplier design the part to fit its own production process. Engineers on both sides came to understand each other's products and processes. When a design had to change, which Helper and Henderson note happened to most parts at least once in a model's development, an American supplier often required a renegotiated contract and could charge well for the change; a Japanese supplier was simply asked to make it, and both parties trusted each other to sort things out later. They quote a supplier who sold to several carmakers: "Honda cares about making the part fit the car, while Ford cares about making the part fit the blueprint."

None of this was soft. Toyota's relationship with its suppliers was, in the words of one supplier's manager quoted in the paper, not "a cozy relationship." Toyota pushed suppliers very hard on cost and defects, reduced the business of suppliers who missed their goals, and left the relationship altogether if improvement did not come. It collected more data on supplier performance than GM did. The difference was in how the data was used: as an aid to finding the root causes of problems, alongside judgement and conversation, rather than as a scoreboard for rewards and penalties.

Read with Hirschman's terms, Toyota kept exit and voice both alive, and put voice first. GM, for most of the period, relied on exit.

The figures Helper and Henderson gather from earlier research show what was at stake. Purchased parts, they report, made up about seventy per cent of GM's costs, while direct labour, legacy costs included, was about ten per cent. Other researchers had estimated that supplier contributions accounted for a third of the Japanese carmakers' advantage in the engineering hours needed to develop a new car, and that the defect rates of parts from Japanese suppliers were of the order of one tenth of those from American ones. In a sample of suppliers selling both to Toyota and to an American carmaker, the average supplier reduced defects by fifty per cent for Toyota between 1990 and 1996, and by twenty-six per cent for its largest Americ-

an customer. The same supplier, in other words, improved nearly twice as much in the relationship that listened.

A second body of research looks inside the network that did the listening. In a study published in 2000, Jeffrey Dyer and Kentaro Nobeoka examined how knowledge moved among Toyota's suppliers.[23] Earlier research had suggested that knowledge spread faster inside Toyota's production network than inside its competitors'. Dyer and Nobeoka argued that Toyota had built the processes that made this happen: it gave members reasons to share valuable knowledge openly while protecting them from undesirable spillovers to competitors, it prevented free riders, and it lowered the cost of finding the right knowledge. It did this by creating a strong network identity with rules for participation and entry, and by treating production knowledge as the property of the network rather than of any single firm. They report evidence that suppliers learned faster after joining.

The careful reader will notice what this research does and does not show. It does not show that supplier relationships alone caused GM's decline; Helper and Henderson are explicit that many factors were at work. It does not show that Toyota's model would have worked unchanged at GM, with GM's history and organisation. What it shows is a consistent pattern, documented across independent studies, in which the firm that invested in voice with its suppliers learned faster than the firm that relied on exit.

Why GM could not simply decide to listen

The most instructive part of Helper and Henderson's account is not the contrast. It is what happened when GM tried to change. Helper surveyed American auto suppliers in 1989 and 1993. By 1989, GM had the highest scores of the three Detroit firms on items such as whether suppliers expected their customer to help them rather than switch to a rival offering a better deal. By 1993, the paper reports, suppliers again felt that GM could not be trusted.

The authors describe this as a problem of credibility. In 1982 GM's executive director for purchasing told a trade reporter, as they quote: "We need to throw off the old shackles of adversarial confrontation and work together in an enlightened era of mutual trust and confidence." In the same article a GM purchasing agent was quoted: "I find it hard to stop thinking that efficient purchasing means having a lot of vendors fighting over a job." Senior managers could announce a commitment to long relationships, Helper and Henderson write, but until the announcement was matched by commitments and incentives at the local level, neither workers nor suppliers appear to have believed that the managers they actually dealt with would keep to it.

That is the finer point of voice that this whole book keeps returning to. A voice channel is not opened by an announcement. It is opened by the last few occasions on which someone spoke and something happened, and it is closed by the last few on which nothing did. A supplier who has been squeezed for a decade does not hear a speech about partnership as an invitation. It hears it as the opening of a negotiation.



What voice cost Toyota

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What voice cost Toyota

It would be misleading to describe Toyota's way as free, and the research does not. Helper and Henderson's account makes the costs visible in its own terms. Engineers on both sides had to spend time learning each other's processes. Design had to be handed to suppliers with only the outline specified, which meant trusting them with work a more controlling buyer would have kept. Design changes had to be made on trust and settled later. Relationships had to be kept through bad years, with business reduced rather than ended

when a supplier fell short. Dyer and Nobeoka add the cost of building a network with rules that let knowledge move without being stolen.[23]

In Hirschman's terms, Toyota paid to lower the price of voice for its suppliers. It made speaking up cheap for them by making it expensive for itself.

That is the finer point a leader most needs from this case. Voice is not costless, as chapter 3 set out. Someone always pays for it. The design question is who pays, and when. In an arm's-length system, the supplier pays to raise a problem, through risk to the relationship, and so problems tend not to be raised. In a relational system, the buyer pays in advance, through time, people and patience, and problems arrive early. The second system costs more at the start and less later. Whether it is worth it depends on how much the buyer depends on what its suppliers know.

For a car, which contains thousands of parts designed and made by other firms, the answer is a great deal. For a business buying office paper, the answer is very little, and an arm's-length market is the right membrane. Part of a leader's judgement is knowing which of their relationships are which.

Why the cheaper contract cost more

There is a reason this matters beyond the history of one industry. Arm's-length contracting often looks cheaper at the moment of purchase. Competitive bidding drives the price of a part down. The costs it creates arrive later and elsewhere: in design problems found late, in suppliers who will not invest, in quality failures that reach customers, in the slow loss of the most capable suppliers to customers who treat them better.

That last cost is Hirschman's railway again. The suppliers most able to leave an adversarial customer are usually the most capable ones, who have other customers to go to. A carmaker that squeezes its suppliers hardest may find, over time, that it is left with the suppliers least able to help it, which is exactly the clientele Hirschman's railway was left with. The decline that follows does not appear as a single decision. It appears as a slow drift in quality and speed that no one ordered.

Ammanuel Santa Anna's *Ecstatic Economics* states the principle behind this in a sentence written about the whole economy, and it fits the supply chain closely: "An economy that destroys relationships in order to produce commodities is destroying wealth in order to create the illusion of wealth." The cheaper contract was the illusion. The relationship that would have carried the warning was the wealth.

The book is equally clear that this is not an argument against business. "The alternative is not anti-business," it says, describing organisations that measure more than one figure. It is business that keeps its relationships able to carry information.

The same pattern inside the firm

Chapter 2 described Richard Freeman's finding that union members, who had a grievance channel, quit less often than comparable workers without one. The car industry showed the inside version too. Helper and Henderson describe GM's assembly lines of the 1960s and 1970s as places where workers were neither expected nor encouraged to contribute to improving the process, and relationships with local management as actively hostile. Chapter 6 follows what happened when one of those plants was reopened under different rules.

Santa Anna's canon work *Organizational Soul Work* names what any such channel is up against. "Structural silencing is particularly insidious because it appears neutral," he writes. A supplier review that asks only about price and delivery dates, an employee survey with no open-text field, a quarterly business review that runs out of time before anyone asks what is going wrong: none of these is designed to silence anyone. Each of them does.



A household, working it

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A household, working it

The same pattern can be seen at the scale of a household, and here the example is a composite, assembled from several ordinary situations and labelled as one.

A family of four has, for nine years, used the same small garage for its two cars. The owner knows the cars, calls when a part is about to need replacing, and once told them, unprompted, that a repair they had booked was not yet necessary. Last year, to save money, they moved to whichever garage had the lowest quote each time, booked through an app. The individual bills were lower. Over the year, two problems that

the old garage would have spotted early were found late, and one breakdown cost more than the savings. No one at the new garages did anything wrong. None of them was in a position to tell the family anything, because none of them knew the cars.

This is not an argument that the cheapest quote is always wrong, or that long relationships are always right. It is a small version of the GM story. The family had moved from a relationship that carried voice to one that carried only price, and had lost the information that travelled in the first without noticing until the cost appeared. The same reading applies to a family doctor, a landlord, a bank, or a school. *The High Frequency Workbook* gives the household version of the principle: "Every financial decision is a values decision." Choosing the cheapest provider each time is a decision about what the household values, and one of the things it gives up is being told.

The finer points, for a leader

Most leaders reading this will not be redesigning a global supply chain. They will be responsible for a few dozen relationships that matter: key suppliers, a few major customers, a team, a handful of partners. The GM and Toyota contrast suggests five points of practice, each grounded in what the research describes.

Separate voice from price. A supplier who raises a problem in the same meeting where prices are negotiated will hear every problem as a bargaining chip, and so will you. Helper and Henderson's account of Toyota is of a firm that used hard performance data to find root causes rather than to hand out penalties, which kept the problem conversation from turning into a price conversation. A leader can do the same at small scale: hold the problem-solving conversation separately from the commercial one, and say so.

Pay for the first warning. The supplier's engineer who calls about the bracket is saving you money. Make it visible that this is valued, not punished. A simple rule, that a supplier who flags a problem early is not penalised on price for it, changes what they will tell you.

Keep more than one source, and talk to both. Toyota did not rely on voice alone. Keeping a second supplier keeps exit available as a discipline. The mistake is to treat the second supplier as only a threat. Talk to both.

Ask about the problems you have not heard of. In every supplier review, add one question: *What is the thing you are worried about that we have not asked you about?* It costs a minute. It is the question that the most capable suppliers are waiting for.

Watch who leaves. If the suppliers or staff leaving you are the ones you would least like to lose, your exit signal is also a voice signal. Find out why, from them, before the next one goes.

Two related books take these points further: employee ownership, which builds voice into the structure of the firm itself, in employee ownership, and the history and evidence of gainsharing, which ties the gains from shared improvement back to the people who make them, in gainsharing. For a value chain reading of where improvement actually happens inside a firm, see the Alpha Paper *Alpha Value Chain*.

The part, again

Back to the bracket that is a millimetre off. In one relationship, the supplier's engineer calls. The carmaker's engineer listens, the drawing changes, and the problem never reaches a customer. No one outside the two firms will ever know it happened. Its value appears nowhere in the accounts, because the cost it prevented was never incurred.

In the other relationship, the engineer says nothing. The part goes into production. Months later, warranty claims rise, a recall is considered, and the purchasing department begins looking for a new supplier. The exit signal has arrived. It is accurate, and it is late.

Helper and Henderson's figure, forty-six per cent to twenty over twenty-nine years, is the sum of many such moments, along with everything else that went wrong. It cannot be broken down into brackets. But the pattern is visible in it all the same. A firm that listened to its suppliers learned. A firm that mostly counted them as costs learned only when they left, and by then the knowledge had gone with them.

The Tool: The Supplier Voice Protocol

For any leader responsible for buying from other organisations, from a team lead with three key vendors to a director with a supply base of hundreds. It sets up a voice channel that is kept apart from price. Adapt the word *supplier* to *partner*, *contractor* or *provider* as fits.

1. Choose the relationships. List your suppliers and mark the five to fifteen whose failure, or whose quiet decline, would hurt you most. These are the ones the protocol covers. Do not start with all of them.
2. Separate the conversations. For each chosen supplier, set up a short conversation, thirty to forty-five minutes, every quarter, that is explicitly not about price. Put it in writing: *this conversation is about problems, risks and ideas, and nothing said in it will be used in our commercial negotiations.* Keep that promise, every time. If you cannot keep it, do not make it.
3. Ask the same four questions. In each conversation, ask: *What is not working well for you in how we work with you? What problem do you see coming that we have not raised? What would you change in our specification, process or timing if you could? What have you stopped telling us, and why?* Write down the answers in their words.
4. Close the loop within thirty days. For every answer, record one of three responses: *acted* (and what), *not acting* (and why), or *investigating* (and by when). Send that record back to the supplier within thirty days. A supplier who sees what happened to what they said will say more next time. One who hears nothing will stop.
5. Reward the early warning. Agree in advance, and in writing, that a supplier who raises a quality or delivery problem before it reaches you is not penalised for it in the next price round. Then look, each year, at which suppliers raised the most early warnings, and say so to them.

6. Review the protocol yearly. Once a year, look across all the conversations and ask three things: which suppliers said the most, which said the least, and which have left or reduced their business with you. Compare the lists. Silence followed by exit is the pattern this protocol exists to interrupt.

Reading the results. In the first year, expect the number of problems raised to rise. That is the protocol working, not the supply base getting worse. Over two to three years, the measure that matters is whether problems are being found earlier, in design and planning rather than in production and with customers. For a household, the same protocol shrinks to one question asked of the three or four providers you rely on most, once a year: *what should we know that we have not asked you about?*

Your page — run the The Supplier Voice Protocol here, dated.

A note on method

All figures for General Motors are taken from Helper and Henderson, from the published abstract of the journal article and from the full text of their NBER working paper of the same title; figures they cite from earlier studies are reported as theirs. The chapter does not compute any figure of its own. The household example is a composite, assembled from ordinary situations and not describing any one family.

References

1. Helper, S., & Henderson, R. (2014). Management practices, relational contracts, and the decline of General Motors. *Journal of Economic Perspectives*, 28(1), 49–72. https://doi.org/10.1257/jep.28.1.49. Working paper version: NBER Working Paper 19867, https://doi.org/10.3386/w19867, from which the passages quoted here are taken.
2. Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: The Toyota case. *Strategic Management Journal*, 21(3), 345–367. https://doi.org/10.1002/(SICI)1097-0266(200003)21:3<345::AID-SMJ96>3.0.CO;2-N

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