Winning at all costs – intellectual assets in Formula 1

Ethically questionable practices are a part of the knowledge economy, but where do you draw the line? Firms in knowledge-intensive industries often employ unrecognized informal channels for intellectual capital acquisition. Managers should consider the boundary between right and wrong in their particular industry, and whether they have the tools for dealing with ethically questionable practices.

Managerial discussions of the knowledge economy are loaded with a “supposedly caring and sharing ethos”. Firms adopt knowledge management (KM) approaches that rely on community and trust, but that focus hides practices wholly incompatible with that ethos.

Does a shift towards a “soft” knowledge economy exclude the dark side of a market economy? The dark side refers to ethically questionable practices and conventions such as exclusion, deception, exploitation, and theft of trade secrets. Practices like industrial espionage are associated with the ethos of “old” industrial capitalism or with “catch-up economies”, but ethically questionable practices of knowledge acquisition exist inside the knowledge economy – not outside it.

The case of the Formula 1 industry

The Formula 1 (F1) industry has been portrayed as a best-practice example of how community and trust, knowledge spill-over and common conventions facilitate innovation. However, a light hasn’t been shone into the dark corners of these conventions and practices that form the basis for innovation capabilities and competitiveness in F1.

Looking at F1 as a whole, we can understand espionage as being part of industry culture, rather than just the deviant behaviour of a few “rogue” employees. With the increased demand for knowledge in a market with a limited supply, teams will apparently (as has been proven in the exposure of high-profile scandals) obtain surreptitious knowledge through unrecognized informal channels.

The spying scandals

In 2007, two separate industrial espionage cases were uncovered. The first one involved the two largest constructors, McLaren and Ferrari. Accusations that a senior British engineer at Ferrari had handed over a 700-page dossier of confidential technical and strategic information to the head designer at McLaren surfaced. The two engineers had also contacted a third constructor, Honda, apparently with the intention of seeking new employment with Honda. The case went to court both as a civil lawsuit in Italy, and in Britain (where it was dropped after Ferrari had reached an out of court agreement with one of the defendants); and to the court of the international governing body motorsport, the FIA. In its verdict in September 2007, the FIA found McLaren guilty of possessing or at least being aware of stolen Ferrari intellectual property (IP) – and sentenced them to pay a fine of $100 million. Almost immediately after the verdict of the FIA case had been announced, another FIA case
was revealed. It involved a former McLaren engineer taking McLaren IP to his new employer Renault. In the subsequent FIA trial, Renault was found to have technical details for McLaren’s F1 car. These espionage cases were preceded by a less publicized case where two former Ferrari engineers were sentenced to prison in Italy for disclosing trade secrets to rival constructor Toyota.

2007 is by no means a unique year in the history of espionage in F1. There is previous history of industrial espionage in the industry, but the cases that have surfaced are from recent times when media attention has grown and court cases on stolen IP have become more common.

The public and private life of knowledge

One of the most striking characteristics of F1 which sets it apart from many other industries is the large public interest in the personnel and the technologies. The media follows personnel movement and any new innovation. Specialist journals employ technical experts to draw detailed sketches of new technologies and designs as soon as they appear on the cars, and former engineers to analyze their effects. Frequently, this leads to rival constructors developing similar solutions. Much of the discussion in the legal proceedings on what constituted espionage in F1 addressed the question of what information was generally available. FIA court transcripts showed that the exact increase in Ferrari’s wheelbase length in 2007 was deemed to be in the “public domain”, and that it was “common knowledge” that McLaren ran a seamless shift gearbox.

Another quirk in F1 is the short lifespan of innovations, and thus the usability of competitor intelligence. As Geoff Willis, former technical director of Honda commented:

[Stolen knowledge] would just be enabling you to produce what that team had already produced and therefore you would always be playing catch-up, however good your manufacturing and design and operations loop is it is going to take you four to six weeks to get those sort of components on a car … what you want is an understanding of why you have come up with those engineering solutions and not what those solutions are.

This corresponds to the industry convention that “as long as a team knows it can keep ahead of its rivals it is not a major problem”. The fact that four to six weeks is considered a healthy margin to the competition is a good testimony to the pace of innovation. Another aspect highlighted is that technology itself is useless unless you have the “know-how”. The explicit knowledge (what is done) is less interesting than the tacit practices, the philosophy, and the routines (how things are done).

The traditional way of looking at intellectual capital (IC) assumes that routines, philosophy, how things are done, cannot be stolen and cannot be owned. This is not to say that knowledge emanating from other constructors’ cars is uninteresting or that there is no market for it. The designers acknowledge that knowing where your competitors are strong will help the innovation process.

This also reveals another previously identified convention in the industry: observation and competitor comparison analysis, i.e. “legal spying” that the constructors engage in on a frequent basis. Such conventions have been recognized as one of the sources of high innovation levels in the industry, and the high innovation pace ensures a market where demand for knowledge is high but where firms have taken several steps to reduce supply and protect their knowledge. Under these conditions, firms will often actively seek out informal channels such as staff poaching, observation and, ultimately, industrial espionage.
Legal spying techniques

Procedural and institutional barriers, like engineers contracts that stipulate that all inventions are the property of the constructors, exist in F1, yet knowledge transfers through informal channels are accepted as both inevitable and effective. The most common channel is direct observation. Knowledge is acquired informally for competitor comparison analysis to understand where and how progress in design can be made. Constructors directly observe each other at race weekends at close quarters, surrounded by the media who photograph and film the cars as closely as possible. It’s that straightforward, and completely legal.

Employee mobility

The fiercest competition in F1 involves accumulation of human capital. Human capital is the cumulative tacit knowledge of employees within a firm. In F1, the cars are designed by teams. All design teams have key personnel, for whom there is a constant demand in the market.

In terms of IC theory, that intangible knowledge asset doesn’t leave its creator in a transfer, and when an employee leaves a company he subsequently shares his knowledge with competing firms. In F1, employees are expected to bring knowledge with them when switching jobs, and some teams even do a thorough debrief. High employee turnover is considered inevitable, yet constructors are continuously prepared for knowledge attrition.

The industry acknowledges the value of the knowledge accessible as relational capital, as it seems to be instilled in drivers and engineers. This stands in contrast with the image of rogue employees who behave opportunistically.

Corporate versus individual responsibility

Within F1 it seems like the convention of acquisition of trade secrets is deeply rooted – it’s not seen as morally reprehensible but as another form of informal knowledge transfer. The process of external learning is exactly the same through “observation” – i.e. what the accused technical director “would normally do” – as it is through spying, i.e. what he was accused of. This also underlines the difficulty in one day seeing the process as knowledge sharing between “old friends”, and the next see it as transfer of stolen knowledge between “rogue employees”.

It goes without saying that employees might sometimes pursue their own interests instead of those of the organization, acting opportunistically for personal gains outside the scope of their duties as part of an organization; but it’s interesting to note how the firms involved in the espionage cases attempted to distinguish the responsibilities of the firm from those of an individual employee. In other words, how much responsibility does a firm have for the behaviour of an employee when they are considered to be acting on behalf of the firm? While firms need to ask themselves if they have the tools when a trusted colleague turns rogue, there are also questions about the firm’s responsibility in creating the norms.

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