

Introduction

A new set of rules for innovation during times of economic uncertainty

The year 2008 will be remembered for many things – in particular, the fact that in this year the world entered a financial crisis of unprecedented magnitude and scope. It was the year when we were struck by a global recession resulting from excess leverage in the financial markets, the unwinding of the Federal Reserve's fiscal experiment and no-credit-necessary mortgage lending (to name but a few of the culprits). Corporate lay-offs, skyrocketing unemployment rates and declining stock prices grabbed news headlines. As we enter 2009, business executives, regardless of their industry, grapple with balance sheets in a state of flux and world leaders struggle to bring a sense of calm to their economies.

With the United States, Europe and Japan officially contracting, the reach of the recession is far and wide, touching all corners of the earth and all industries. However, there are two areas that should be insulated from its effects – IP portfolio management and research and development (R&D).

For those in the world of intellectual asset management (IAM), there is an important point to acknowledge: R&D and IP investment are as paramount

in a bad economy as they are in a good one. These are the times when C-level executives should focus their IP and IAM strategies on resource optimisation and innovation. These are the times when IP portfolios become a fresh source of untapped value. Intellectual property can:

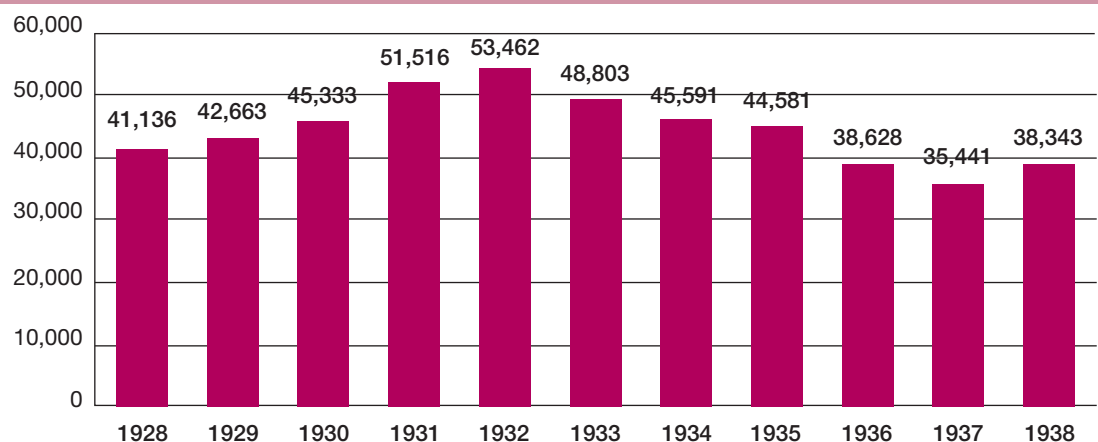
- increase a company's market value;
- provide a steady stream of cash;
- enable competitive advantage; and
- ensure predictable earnings growth.

In tough economic times, forward-thinking IP leaders need to establish their own change management initiative such that corporate strategy is shaped (and in some cases dictated) through a company's investments in innovation.

A set of rules to move forward

The importance of IP and R&D investment remains constant, despite economic conditions, but there is a new set of rules regarding how to drive this point home in your organisation. These rules can be brought to

Figure 1: Volume of US utility patents granted 1928-1938



boardrooms and executives to show the importance of investing in innovation during an economic downturn.

Rule one: learn from the lessons of the past

Let us start by looking back in history to the era of the Great Depression in the United States, in order to see what we can glean from our predecessors.

Research done using the Thomson Reuters Derwent World Patents Index (DWPI) database suggests that US-based patent filings and IP litigation experienced up-ticks during past recessions. As Figure 1 indicates, there was substantial growth in the number of patents granted following the onset of the Great Depression in 1929. Prior to the Wall Street crash in that same year, US patent publishing activity was falling. Interestingly, however, it actually picked up during the immediate aftermath of the onset of the Great Depression (1929 to 1932) and remained at levels higher than 1929 until 1936 (Thomson Innovation, DWPI File).

Patenting in the area of physics was on a steady climb in the 1930s, including inventions covering projection, camera and recording equipment and film handling and packaging. Specifically, there was a 43 per cent increase in the number of US physics patents granted in 1932 (4,310) over 1929 (3,009). This is consistent with the overall trend for the total number of patents granted during that same period. Those numbers increased by 25 per cent, with 53,462 US patents granted in 1932 compared to just 42,663 in 1929.

Similarly, other recessionary periods were followed by economic boosts driven by innovation and new inventions. The recession of the 1970s was rescued by the growth of the personal computer. Likewise, the economic downturn in the late 1980s (which carried into the 1990s) was salvaged by the boom of the Internet. Investment in innovation during these periods spurred growth and created opportunities that helped to stimulate the economy.

The point of this rule is to learn from the lessons of the past and to consider history as you consider your R&D and IP investments. Going back to the Great Depression era, the increase in projection, film and camera equipment technology was tied to the boom of the film industry during that same period. Investments made in these areas boosted the economy, created jobs and generated cash for those wise enough to make them, despite what was happening in the larger economy.

Rule two: invent – even if it means re-inventing your company

You may be questioning how your company is going to invest in anything right now, regardless of what history

tells us. If you are struggling to make ends meet, how are you going to find the resources to invest more seriously in intellectual property and R&D?

It is not going to be easy and sacrifices will need to be made, but they should not be made in the areas of R&D and intellectual property. To do so would be cutting off your prospect of future success. You need to start by taking a holistic view of your assets and liabilities, and prioritising their long-term value to your organisation. As part of this exercise, you should take a long, hard look at your organisation to see whether the time is right to consider reinventing your image and/or product line as part of your innovation strategy.

A good example of a company doing just this is General Motors. Despite the bleak economic reports (at the time of writing in November 2008), General Motors is investing billions of dollars and supporting patent litigation for its electric automobile programme, hoping that the new Chevrolet Volt will be the catalyst that keeps the automotive giant afloat and helps it to grow. A recent article in *BusinessWeek* noted what many in the IP world believe: the Volt could be General Motors' best hope for the future ("Can the Chevy Volt Save GM?" *BusinessWeek*, October 29 2008). Saddled with a dwindling market share and a reputation as a purveyor of gas-thirsty vehicles, the Volt is the company's most promising upcoming vehicle. It demonstrates the company's ability to innovate and (in the process) create a financial foothold to turn the automaker around. General Motors is reinventing itself through innovation, R&D and intellectual property.

The confluence of innovation and intellectual property creates a series of new supply chains, technologies, systems and methodologies. New manufacturing processes are stimulated – and those processes often come with a new purchasing list of materials and transportation needs. These new processes and products create a fresh set of content which can be added to one's IP portfolio and will require diligent IP protection.

Rule three: understand whether your company's dog wags its tail or the other way around

"Most often people equate basic research with its outcomes, especially the new technologies and products it creates, and then they try to manage it like they would product development or a business with disastrous consequences. The reason for investing in basic research is to increase your chances of survival during periods of intense change... In bad times, having a significant basic research asset allows a company or society to more rapidly adapt, compete and change. Basic research is all about agility." This is an excerpt from a blog posting by

Rick Rashid, senior vice president for Microsoft's research team ("Microsoft's Rick Rashid Answers the Multicore Proust Questionnaire," Multicore Programming Blog, CILK Arts, November 3 2008 – www.cilk.com/multicore-blog/).

Microsoft understands how to leverage intellectual property and innovation as catalysts for growth. IEEE Spectrum recently ranked the company as having the most important and influential portfolio in the computer systems and software industry (William Sweet, "Keeping Score in the IP Game", IEEE Spectrum Online, November 2007 – www.spectrum.ieee.org/nov07/5645). It is only natural, then, for Rashid to evaluate the importance of R&D in good times and bad.

Without question, Microsoft demonstrates how to invest properly and strategically during economic slowdowns. Horacio Gutierrez, vice president and deputy general counsel of Microsoft's IP and licensing group, contends that the company sees the economic slowdown as an opportunity to come out stronger than it was before. For instance, in such times the company has every intention of benefiting from the potential increase in the availability of PhD-level researchers and other engineering talent. In addition, it seeks to seize the opportunity to acquire strategically valuable intellectual property which may be divested by companies looking to generate a short-term monetary return. These added resources, which Gutierrez describes as "IQ+IP", will be used to accelerate the pace of innovation further at a company that already invests an industry-record \$8 billion in R&D activities.

"Our mission is to continually create richer products that showcase the magic of software and that customers want to use; in doing this we take a long term view and try not to let the inevitable cycles of the economy affect our product development and release strategy. That makes Microsoft different from many other companies." Gutierrez contends that the company's IP strategy complements its R&D strategy, in that R&D drives its IP initiatives. Microsoft builds an IP portfolio because it has a massive R&D engine that produces significant innovations and outputs, as is reflected by the consistent line of product updates and introductions the company makes. (Information about specific Microsoft Research activities can be found at <http://research.microsoft.com/>.)

"The dog wags the tail, not the other way around," Gutierrez explains. "When we assemble an IP portfolio, we are protecting our investments in the market. There are companies that acquire patents for purposes of monetizing them directly. Microsoft obtains patents because it wants differentiated, innovative products to

enter the marketplace to maintain its competitive edge. We put new features in products that our customers will want, and we protect them through the available legal means.

"IP means many things to many people. At Microsoft, it is a tool to ensure that we can achieve our technology and business objectives. IP is a means to ensuring we can continue to innovate and be successful."

Most significantly, Gutierrez stresses the importance – especially during an economic downturn – of measuring intellectual property along a lifecycle where the primary deliverable is not solely monetisation. From his view, Gutierrez warns of the dangers of focusing on the short term. He has the view that a short-term perspective keeps an IP holder from realising the true business value of an IP portfolio. Gutierrez takes great pains to articulate the strategic value that intellectual property delivers. He looks at the value of the patent portfolio in a multi-dimensional way: from the freedom of action it provides the company (avoiding potential disruption by third-party IP claims) to its value in the context of litigation (both defensively and for purposes of protecting its own inventions from infringement), to monetisation and so on. For Gutierrez, the key is to view Microsoft's IP investment through a lens with a long-term view.

Conclusion: the future of recession-based investments

There are several lessons that can be learned from history, General Motors and Microsoft. These examples underscore the importance of remaining committed to R&D and IP protection, despite economic conditions. By doing so, a company can ensure its longevity, whether that be through a reinvention of itself or ongoing, customer-focused product development. This commitment also contributes to a long-term competitive advantage and opens the door to the possibility of creating cash and generating revenue via new IP channels.

While daily newspapers cast an aura of economic despair, there are glimmers of light out there. IP portfolios and R&D departments by themselves can unleash new sources of value when given the opportunity to do so. When the two work hand in hand for a company's benefit, there is much more to gain.

When the economy is not in growth mode, it is imperative that investments in intellectual property and R&D be made in the right fashion to create a future source of revenue streams.

Just as there is no clear-cut time period when an economy will exit a recession, there is no clear-cut methodology for getting companies to move beyond theory and more towards application. Certainly, we do

not have all the answers. But one thing that remains clear: we need to change the way we perceive R&D and intellectual property and the value they deliver to an organisation. Otherwise, companies will never fully grasp what innovation can mean.

Rules for innovation in a downward economy

- Learn from the lessons of the past: difficult times require you to push the boundaries of what has traditionally been accepted.
- Invent – even if it means reinventing your company: reinventing your image or product line can infuse new growth into your organisation.
- Understand whether your company's dog wags its tail or the other way around: does your IP portfolio drive R&D or does R&D drive your IP portfolio?

Help Thomson Reuters to compose the new rules of IP optimisation

While history has taught us that investing in R&D and intellectual property during a recession is the right way to go, we have also learned that the best sources of value are derived when people work together toward a common vision.

In order for the rules of the game to change, Thomson Reuters needs the assistance of others to join the cause. This chapter contains three rules for companies to consider about how to grow in a recession. What other rules should be included?

We encourage your feedback. Complete our online survey (www.surveymonkey.com/s.aspx?sm=OOAVTuUQbG0zfDbLcwDx_2bQ_3d_3d) and we will send you the results of the survey and what other rules are suggested.

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