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Episode 154: Keeping it creative: What happens to productivity when innovative firms are acquired?

VOICEOVER
Welcome to Up Close, the research, opinion and analysis podcast from the University of Melbourne, Australia.

ERIC VAN BEMMEL
I?m Eric van Bemmel, thanks for joining us. When a company acquires another company what?s the effect on the productivity, the creativity of the workers being acquired along with them; particularly in research and development intensive firms, where so much depends on the output of the firm?s inventors and creators of new technologies. When those firms get swallowed up, usually because of the very innovative potential their workers embody, does innovation suffer? To help us answer this question we?re joined this episode by Associate Professor Kwanghui Lim, an expert in strategic management from the Melbourne Business School. Kwang has researched and written numerous papers on the strategies used by firms to acquire and manage knowledge and to sustain and promote innovation. Kwanghui Lim, thanks for being our guest on Up Close today.

KWANGHUI LIM
Thank you for having me, Eric.

ERIC VAN BEMMEL
We?re going to be talking about the effect of acquisition on innovation and on the inventers that produce those ideas in a moment, but just back to basics for a moment here, why do business firms acquire other business firms.

KWANGHUI LIM
Why, indeed? A lot of research actually shows that acquisitions do not yield a positive return and there are academic studies that have been done over the last few decades that show that on average the return of doing an investment is zero. So it is, in fact, a very good question - why do firms acquire other firms if it doesn't seem to give a return? Now in the early days, many decades ago, the main reason was to diversify financial risk. So you as a manager would try to invest and acquire other

firms to build a portfolio, a conglomerate, to reduce risk and dependence on any particular area. However, in recent times the focus has shifted more and more to acquisitions as a means of acquiring external knowledge; as a way for the firm to build up technology that it didn't already have or to acquire patents or innovative personnel from other firms that it wants to be part of its firm. Let me read you a quote from the Mergers & Acquisitions Handbook. This is quite interesting because it says, ?Unlike diversification of the 1960s, which was financially driven, M&A activity in more recent times was market and industry driven. Large corporations with their huge resources have sought to acquire positions in growth industries where the competition is dictated not by financial or operational strength but by technological factors. In many cases the only rational entry strategy available to corporations wishing to enter these markets or industries is acquisition or merger.?

ERIC VAN BEMMEL
Just briefly, the Mergers & Acquisitions Handbook, is that kept in the top drawer of all the CEOs in the land?

KWANGHUI LIM
This is the bible on mergers and acquisitions.

ERIC VAN BEMMEL
Next to Gideon?s Bible then?

KWANGHUI LIM
Yeah.

ERIC VAN BEMMEL
Now one reads in the sort of management literature terms like vertical integration and horizontal integration, which sounds very jargonistic, but these are integral to this notion of a company sort of swallowing up another company, aren't they?

KWANGHUI LIM
Yeah. So vertical integration has to do with a firm acquiring other firms that supply them that you think of as further downstream or upstream from their current position in the market. So for example if you think of a supermarket chain, vertical integration would mean them buying a dairy producer or buying a cereal maker and offering the home brand. A horizontal integration has got to do with them buying a similar business, maybe in a slightly different area. So if Coles decided to buy Safeway, or something like that, that would be more of a horizontal move.

ERIC VAN BEMMEL
So, Coles and Safeway being the two largest supermarket chains in Australia, where we?re speaking from.

KWANGHUI LIM
Right.

ERIC VAN BEMMEL
So horizontal integration can be also a matter of removing your rivals, is that right?

KWANGHUI LIM
Sometimes, that's a really controversial issue because in some countries it may be illegal and there are ethical concerns as well. But it does happen that you see firms buying up other firms and then closing them down or firms buying up other firms and then not using the technology or the knowhow that was acquired. So there are situations that go on and that?s very, very controversial.

ERIC VAN BEMMEL
Now, granted that acquisitions are often driven by the need to getting access to technologies, but what are the special characteristics of corporate acquisitions in the technology industries that you wouldn't see, for example, in supermarkets doing acquisitions?

KWANGHUI LIM
So technology acquisitions are mainly motivated by one of three needs. The first is the need to acquire particular technology that you don?t know enough about, and this happens a lot with pharmaceutical companies buying biotech companies. So there are a lot of these pharmaceutical companies that have a lot of knowhow about particular treatments and drugs but some of the new biotech companies are pioneering in a field that they?re not so familiar with but that they want to get into, and they may just go and acquire these firms. A second kind of an acquisition happens when you have a firm buying other firms that have complementary technologies, and you might do that because you think you can combine those technologies within your firm in a better way that some other firm can or that the market can. So an example of that would be a recent acquisition by Apple Computer, which is now a really successful firm in the mobile phone industry. They decided to go acquire a semiconductor design firm that makes semiconductor chips - these are the little brains that go into your iPhone or your iPod Touch or any of these little devices that people want to carry around. They think that by buying this little firm and integrating that knowledge into their skills in building software, that they?re able to build better mobile phones than their competitors. So that?s a slightly different reason why one might acquire in the technology space. A final reason why you might do so in a technologies sector would be to acquire an existing user base. So, for example, you might be able to build something but people are already very happy using whatever solution is out there and they?re not willing to switch, so by buying that firm you're buying the user base of that firm. Again, a very good example of this would be the purchase by Google, which is the leading search engine company, of YouTube, the video streaming solution that became wildly popular. And in 2006 Google purchased YouTube for $1.65 billion. Now they were, of course, able to build their video streaming solution, and in fact they had their own video streaming solution, but what they really wanted were the users that were using YouTube and that were really unwilling to switch. So by buying YouTube, they were buying these users.

ERIC VAN BEMMEL
On Up Close this episode we?re speaking with Associate Professor Kwanghui Lim of the Melbourne Business School about how corporate acquisitions impact on technological creativity and innovation. Now, Kwang, in the strategy management literature one sees the sort of theories of ways of viewing business entities. One of them that comes up in the knowledge based theory of a firm, another the incentive base, and I just want to pick some of these apart.

KWANGHUI LIM
Right, so the knowledge based theory of the firm puts knowledge as being the central strategic element or resource within a firm and says that that's the part that the firms have to focus on an manage. Because it is difficult to built new knowledge, it is hard to imitate knowledge and it?s not just technological in its nature but embedded in the people and in the processes and in the way of doing things with the firms, the routines that are within the firm. So the knowledge based view of the firm emphasises the ability of the firm to organise people and bits of knowledge and intellectual property, both within and outside the firm, in a way to combine it that creates something new and special that other firms cannot imitate. Does that knowledge reside in the people or do we see it in the databases, in the data centres of the company? Where is it exactly?

KWANGHUI LIM
Right, so there are two parts to that knowledge. The tangible part we think of as the one that is in the databases, in the patents, in the documentation and the standard operating procedures that a firm may have. The intangible part is the part that's embedded in the people and their knowhow and their inventiveness and also in the culture of the firm. You know, in some firms there?s a certain special X factor that they have, an organisational culture that fosters innovation; the kind of environment that is willing to allow people to slip up once in a while but also encourages them to create exciting new things. That?s also part of the intangible side.

ERIC VAN BEMMEL
The incentive based view of business, how does that work?

KWANGHUI LIM
So the incentive based view grows out of economics and the decision sciences and it?s much more of a rational approach to management. But a lot of the emphasis there is on the boundaries of the firm so, you know, what should a firm keep within its boundaries and make versus what it should buy from other firms. It also focuses on incentives; do the managers, do the employees within the firm have to write incentives to invest in the effort that will generate value? Then it emphasises how profit is divided among firms and suppliers and customers. So there?s a lot of thinking that goes into the bargaining that happens between the firm and the supplier as well as, you know, whether consumers have strong bargaining power against the firm and so forth. So you can see that that point of view also has something to bring to the table in terms of thinking about whether a firm should acquire knowledge, whether inventors will work hard, whether they will work cohesively with the rest of

the firm.

ERIC VAN BEMMEL
Now, this knowledge based view and the incentive based view, are we able to apply them in a complementary fashion and can I just to apply them both - both those views, perhaps separately to an example of company?

KWANGHUI LIM
Right, traditionally the knowledge based view and the incentive based view have been at odds with one another and there have been scholars from both sides that have said, well, you know, the other is not too relevant. However, I think in recent times we?ve seen a move towards bridging the two and our paper, which we?ll discuss in a while, tries to do that as well; to say there are some elements of the incentive based view that are very useful, but there are also elements of the knowledge based view that are useful. So they?re complementary and they explain different aspects of success or failure in an acquisition, in our case, but more broadly in the way firms are managed. In terms of an example, I think a good recent example to look at would be that of Google, which has faced increasing competition from Facebook, a social networking platform.

ERIC VAN BEMMEL
We?re speaking in mid 2011 now?

KWANGHUI LIM
Yeah. In mid 2011 Google has not been successful, despite several attempts to launch a social networking platform. so recently they decided to launch Google+ which is a new product that they built with the goal of rivalling Facebook. Now from a knowledge based perspective, one might be thinking about, if you were a manager at Google, do you have the right resources to build a social networking platform knowing that your traditional strengths have been in search technology? Are your knowledge resources organised in a sensible way? Are people in the right team, in the right configuration? Have you invested in the right skill sets within the firm to make good use of knowledge that's outside the firm - among collaborators and using partnerships, alliances, acquisitions - various mechanisms like that to build an ecosystem around Google that will further enhance the value of Google+. From an incentive point of view, a manager within Google would think about, well, do the managers have the right incentives? Do the inventors have the right incentives? I read online that this year all of the employees at Google, regardless of whether they work on this business, will have their bonuses pegged to Google+ and that is a way to incentivise them whether they?re working on Google+ or some other bit of technology within Google to find a way to make Google+ succeed and to link their bit of work to Google+. You also ask, you know, should you build your own or should you maybe go out and buy another social network. Google, in this case, decided to build their own social network, and so Google+ is something that they?ve developed internally. But we?ve also heard in recent weeks that they have gone out and purchased another social network called Fridge that has some tools that are really good for organising your friends into different groups. So they?ve decided that

that?s a good complement to the technology that they have in-house and that that will be folded into the Google+ technology.

ERIC VAN BEMMEL
So this idea of bringing in perhaps smaller companies that have components of the technology they require, does that fit into the knowledge based view?

KWANGHUI LIM
Yeah, so it fits into both views but they speak differently to that activity of bringing knowledge in. That?s why we ended up writing this paper, because we recognised that both views have something to add in helping us understand how acquisitions work.

ERIC VAN BEMMEL
Now, across business firms in general - and not necessarily only in the technology sector - how disruptive is the acquisition process to the acquiring firm, to the firm that's doing the swallowing?

KWANGHUI LIM
So there?s a lot of work that's shown that the act of acquisition is a very disruptive one. I think an example here will help, and this is the example of a firm called Dodgeball that was acquired by Google in 2005. And they were initially a firm that was founded by students and Google wanted to roll their technology into what they had. In 2007 the founders of this acquired entity left, so it was kind of a shame because Google had spent all this money to acquire the firm and they left, saying that the experience was incredibly frustrating at Google. They ended up creating a new firm called Foursquare that came to rival Google, despite having sold the initial firm to Google.

ERIC VAN BEMMEL
This is a location based sort of social network platform?

KWANGHUI LIM
Yes, it is a location based social network platform. So there are many studies that suggest that there is a lot of trauma in this, and there's a lot of tension involved when you acquire a new firm, and this happens both to the acquired firm as well as to the acquiring firm. One of the really stable findings across many academic studies is that if you acquire a firm you should leave it alone; you should keep it semi-independent within the acquiring firm, at least for a while. What that does is it allows a period of time for that acquired firm to stabilise within the existing firm.

ERIC VAN BEMMEL.
They keep their identity?

KWANGHUI LIM
They keep their identity.

ERIC VAN BEMMEL
As a separate entity?

KWANGHUI LIM
That's right.

ERIC VAN BEMMEL
But when it comes to branding that becomes difficult, doesn't it? I mean, if you want, this technology as part of your own identity, you're acquiring another firm?

KWANGHUI LIM
Yes.

ERIC VAN BEMMEL
To allow what you've acquired to maintain its own identity, isn't that a problem?

KWANGHUI LIM
Yes. So that's why in many acquisitions that turns out not to happen. A lot of times when a firm goes out to do an acquisition it is under pressure to consolidate the brands, but it?s also under pressure to achieve some form of cost savings or synergies by removing redundant activities across the two. So that leads to a lot of negativity associated with the acquisitions. We interviewed a large number of inventors and people at acquired firms when we were doing our study, and one of the words that kept coming up was ?demoralised?, and indeed if you do a Google search with demoralised and acquisition, this will lead something like 300,000 results. There are several reasons why people might get demoralised when their firm is about to be acquired. One of them is that you don't know if you will still have a job if you are in that position. If you have a job you don't know if the managers of the acquiring firm will favour their own instead of people from the acquired entity. Thirdly, if you don?t stay, you don't know how the payouts are going to be, the severance pays are going to be. So an example of that would be Business Week, which is a news magazine that was acquired by Bloomberg in 2010. It was reported in the news that a lot of workers at Business Week were worried about severance pay and whether or not they would have a job after that acquisition. So if you're in that position you might not work so hard knowing that an acquisition is coming up; you might be spending a lot of your time polishing up your résumé and calling up friends to see if they have other opportunities. You may also not be putting too much of your work into things that will end up being owned by the acquiring firm.

ERIC VAN BEMMEL
That's how it is for the knowledge workers themselves who are being acquired, if you like. But for the companies that are acquired those workers there are some hazards as well, are there not?

KWANGHUI LIM
Yeah, so there are two forms of hazards. One kind of hazard is what we call a moral hazard; that?s a situation where workers don?t put as much effort in because it?s

hard to monitor them and it?s hard to measure the output that they produce. So this is especially a problem for knowledge workers because, unlike workers who work on tangible products, knowledge workers produce things are hard to monitor and the output is hard to measure. So there is an incentive for that worker not to put in as much as they should. The other kind of a hazard is what we call adverse selection. Adverse selection just means that if you are a company like Google going out to buy other firms everybody tries to make themselves look good - every firm puts their best foot forward - and you don't really know when you're buying that firm whether or not there?s a problem because all those problems will be swept under the carpet. For an example of that one might think of Skype, which is a voice over internet telephony company, that was acquired by eBay, the well-known online auction site. And Skype was bought by eBay for about $2.6 billion in 2008. What eBay didn't know was that Skype?s founders had not included in the sale some of the essential components that made Skype work, and several years later when they became disgruntled at eBay, the founders of Skype actually sued them for something to the tune of $75 million a day for the use of that technology which you might have thought would have been included in the purchase but was not.

ERIC VAN BEMMEL
You would have thought that eBay would've made sure it was there?

KWANGHUI LIM
That's right, but that's part of the difficulty of doing an acquisition, and it goes back to adverse selection, which is you might not have that full set of information when you're doing that purchase. So someone at eBay might have done the due diligence but not have realised that there was this tiny bit of technology that was still owned by Skype?s owners that was a little building block of the thing that was sold and yet not included.

ERIC VAN BEMMEL
We?re speaking about the effect on technology innovators when the firms that employ them get acquired by other companies and we?re joined by Melbourne Business School Associate Professor Kwanghui Lim here on Up Close, coming to you from the University of Melbourne, Australia. I?m Eric van Bemmel. Now, Kwang, I want to focus a bit on your own recent research that looked at the productivity of inventors who worked for companies that were being acquired by other companies. You and one of your co-researchers, Rahul Kapoor, wanted to see how these perspectives we talked about - this knowledge based view, incentive based view, these theoretical ways of looking at a business - how do they predict inventors? productivity once an acquisition has happened? But I want to ask you first of all, what sort of prior research was there in this area?

KWANGHUI LIM
It turns out that there is a great deal of prior research on acquisitions, but much of that research looks at acquisitions from the point of the acquiring firm and very little of the research looks at the view from the point of view of the acquired firm.

ERIC VAN BEMMEL
Which disappears, doesn?t it?

KWANGHUI LIM
Which disappears. So the data ceases to exist because one moment they exist as a firm and the next moment they?re gone and we, as researchers, just done do work on things for which data doesn't exist. So we recognised an opportunity to use patent data to look at acquisitions from the point of view of the acquired resources, the acquired inventors. That's because patents include the name and identification of each of these inventors, and we were able to make use of that data to trace inventors even after they get acquired and after their firm disappears.

ERIC VAN BEMMEL
You chose patents because, well, it?s a sign of productivity, I suppose, but is one patent sort of equal to another? I mean, are their qualitative issues here?

KWANGHUI LIM
Yes, so there are some methodological issues involved in using patents. One of them, of course, is that not all patents have the same value. We used the number of patents that an inventor produces as a measure of their success. To some extent that's a reasonable measure because that's what inventors are hired to do, they?re hired to invent and a firm takes the invention and goes off to patent the invention. But we also do the study with other measures where we count the number of citations that each patent has. So while not all patents have the same value, the citations give a sense of how important a patent is.

ERIC VAN BEMMEL
Citations being?

KWANGHUI LIM
Citations are the number of other patents that refer to a particular patent, and the more other patents cite a particular patent the more important that patent is. That gives us the measure of the quality of an invention.

ERIC VAN BEMMEL
Okay, so your research chose to look at the semiconductor industry. What is that?

KWANGHUI LIM
So, Eric, there are two reasons for that. The first is that I have done a number of other studies on the semiconductor industry, and the second reason is that my collaborator, Rahul Kapoor, used to work in that industry. So we knew quite a lot about the technology, about the players about the industry but, more importantly, we had people that we knew in the industry that could open doors for us to do interviews and to get some real sense of what managers thought and what was really happening on the ground.

ERIC VAN BEMMEL

So can you tell us a bit about what you were expecting to see and what you in fact found?

KWANGHUI LIM
When we first began the research project we thought that the real important thing that was happening in the industry were the strategic alliances, and after doing some preliminary work and interviewing a number of managers, we quickly realised that the action was really in acquisitions. So we were expecting that acquisitions would play an important role; we would have managers say things like, we went out and acquired that firm because those inventors are great and they will now be able to contribute to our firm. So we thought, well, maybe in this space acquisitions might have a positive benefit of some kind. What we actually ended up finding was that after a firm was acquired, and if you traced the inventors of those firms into the acquiring firms you will find that they don?t produce as many inventions as you might have expected. So if you compare those inventors to other firms where they didn't get acquired, you will find that inventors at the firms that did get acquired have a rather dramatic fall in their productivity and this happens around the year that the acquisition occurs. So we can point to the acquisition as being a likely cause of the fall in the productivity of those inventors.

ERIC VAN BEMMEL
Does that fall persist?

KWANGHUI LIM
It persists, unlike that of the other firms that we compared to that they didn't get acquired, where you don?t see the dramatic fall.

ERIC VAN BEMMEL
So, Kwang, just to give us a bit of the scope of your study, you're looking at how many firms, how many inventors and how many patents?

KWANGHUI LIM
In this case we were looking at around 54 firms and our final sample had around 318 inventors and we looked over a time period 1991 to 1998, so quite a long period of time.

ERIC VAN BEMMEL
Most inventors would have more than one patent, probably, under their belt?

KWANGHUI LIM
Yes. So there are a total of maybe around 1600 patents in the study, so it?s quite a large number.

ERIC VAN BEMMEL
I?m wondering is size of both the acquiring and acquired firms made a difference? I mean, if a large company - say Google - is acquiring a garage-based company of six engineers versus a company of 600, what happens there?

KWANGHUI LIM
So we did do some statistical tests on that question and the results were rather surprising. It turns out that the smaller the company the worse the impact is. This is not something we had initially expected but looking back it makes sense, because the smaller the firm the bigger the disruption after acquisition. Whereas if you acquire a bigger firm it?s a little more mature, a little more stable, it?s got its own things in place and so the impact is maybe a bit less of a shock.

ERIC VAN BEMMEL
Just briefly, how do we see the results of your study through the lens of these knowledge based and incentive based views of a business?

KWANGHUI LIM
So the incentive based view would in this case predict that after a firm gets acquired the inventor has less of an incentive, because before they were a part of their own little company and now they?re part of a bigger company. So, you know, before you might be part of an exciting start up company with three other guys in a garage and now you're just a division of Google Inc, so you have less of a motivation hard and spend your weekends at work. Over a period of time, in fact, what we find is that the inventors that get acquired end up converging to the level of productivity of the acquiring firm; in other words, if IBM bought your company, after two to five years you become and IBMer.

ERIC VAN BEMMEL
So the free massage you get at Google is not enough of an incentive?

KWANGHUI LIM
It isn't a bad thing to have but you're not getting more of a massage than the other people at Google.

ERIC VAN BEMMEL
Now, Kwang, we mentioned earlier that some companies that get acquired are allowed to maintain their own identities, either for some short period or into the future, and one example of that, I guess, is YouTube bought by Google, as you mentioned. It?s still seen as sort of its own entity; it?s owned by Google but people think of YouTube as YouTube and not Google. So this idea of maintaining one?s own identity as an acquired firm within a new larger structure, how does your research impact on that idea?

KWANGHUI LIM
So we do actually measure that as one of our variables in the research and we do find that lower level of post-acquisition integration is better in terms of the effects on productivity. In other words, if you buy a firm and you leave them relatively independent within the acquiring firm, you will get a better productivity result than if you just tried to integrate it all in.

ERIC VAN BEMMEL

So, Kwang, what do the results of this research have to teach corporate managers on the ground?

KWANGHUI LIM
So there are several contributions, I think, we make in terms of managerial impact. The first is that managers should go into an acquisition with their eyes wide open and understand the limits. The people that get acquired are not going to act as they did before the firm was acquired and that's something that the managers have to anticipate when they go out and they do an acquisition; over time these people are going to converge, in terms of their productivity, to your own. So going out and making the claim that there will be these massive synergies and people are going to come in as superstars and contribute greatly to your own firm over an extended period of time is perhaps an unrealistic kind of a claim to make when going out to make an acquisition. The second is to be more careful in terms of selecting and integrating the acquired firm, so being very concerned about the adverse selection problem we discussed and making as much effort before the acquisition as possible to find out about the technology; about the people; whether they really have value or it just looks good on paper; whether the skills and knowledge that they have will be a good fit to the firm that is acquiring; and also whether you can find a way to keep them semi-independent enough to be acquired. So I think that speaks to the knowledge based view. From the incentive point of view, I think it?s clear that you will have a negative effect but you can sort of counteract that a bit if you don?t do a direct payout to the founders of these firms or don?t do an immediate payout to all the people, but maybe stagger that payment; make it based on milestones; perhaps give the acquired inventors more at stake, more incentive to work within their existing firm. This has got to do both in terms of giving them things like stock options and incentive programs, but also in terms of helping them fit culturally and socially into the acquiring firm, making them feel that they have a space in the firm, rather than they will feel like those founders I mentioned to you who had felt very unhappy at Google and left and formed a rival firm.

ERIC VAN BEMMEL
Kwang, we?re going to leave it there. I want to thank you for being our guest on Up Close today.

KWANGHUI LIM
Thank you very much, Eric. It?s been a pleasure.

ERIC VAN BEMMEL
On Up Close this episode we?re been speaking with Associate Professor Kwanghui Lim of the Melbourne Business School about how corporate acquisitions impact on technological creativity and innovation. Relevant links, a full transcript and more info on this episode can be found at our website at upclose.unimelb.edu.au. This episode was recorded on 26 July 2011 and produced by Kelvin Param and me, Eric van Bemmel. Audio engineering by Gavin Nebauer. Up Close is created by me and Kelvin Param. Thanks for listening, until next time, goodbye.

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