Chapter 5

IP and Competition Law

Section A

Allegations of Harmony Between IP and Competition Policies: In Search of the Lost Chord

*Gary L. Roberts and Jonathan D. Putnam**

* Charles River Associates

INTRODUCTION

The past decade has seen a resurgence of activity at the regulatory nexus where intellectual property (IP) rights and competition policy meet. One important cause of this increase is the broad introduction of technologies, such as computer operating systems and biological research tools, that act primarily as inputs to the production and use of other inventions. The vertical relationships among these technologies take many forms: between producers; from producer to consumer; among a single producer's product lines; and within a producer's product line over time. Often, these vertical relationships create overlapping and potentially divergent interests.

Overlapping interests often demand coordination among parties (such as competing firms) whose larger interests may diverge, or they may induce conflict among parties (such as consumers and producers in long-term relationships) whose interests are symbiotic if not directly aligned. Either pattern of facts may fall within the purview of competition law. In response, administrators of these laws have begun to issue guidelines and to catalogue fact patterns in an effort to separate benign activity from that which threatens the competitive process.[1] The Bureau of Competition's Draft Guidelines represent one such effort.[2]

A common theme of the guidelines issued by competition authorities is the perceived complementarity between IP and competition policies.[3] Perhaps the authorities are at pains to emphasize the harmony between these bodies of law because IP statutes exempt behavior that otherwise contravenes the competition laws. Moreover, IP rights are seen as a principal growth engine in the "knowledge-based economy";[4] no one wishes to harm the goose or its golden eggs.

We applaud regulatory agencies for guiding firms that must navigate these waters at their confluence, in an effort to "alleviate uncertainty."[5] We believe, however, that the Bureau's Draft Guidelines shares with its counterparts in other jurisdictions an insufficient appreciation of the economic and political tensions between competition policy and IP rights enforcement. Given its conceptual limitations, the Draft Guidelines' reach for certainty must exceed its grasp.

We make the criticisms below not for their own sake, but because we expect intelligent litigants to make them. The causes of certainty and efficiency seem better served by pointing to ambiguities and flaws early in the process, when the resources devoted to effecting them are marshaled cooperatively rather than adversarially.

In the interest of clarity, we first identify seven categories of conflict that arise in the joint administration of IP and competition policies. It is helpful to bear these conflicts in mind as we describe the economic problem that IP policy

---

[1] Government of Canada, Bureau of Competition, *Intellectual Property Enforcement Guidelines* (Draft for Consultation Purposes Only) ("Draft Guidelines"), 1999, para. 4.

[2] In the United States, the Department of Justice's Antitrust Division and the Federal Trade Commission jointly issued similar guidelines in 1995. In Europe, the XXX issued XXX in XXX. In general, our observations apply to these guidelines as well.

[3] Draft Guidelines, para. 3.

[4] Draft Guidelines, para. 1.

[5] Draft Guidelines, para. 4.

addresses: private underinvestment in socially desirable activities. In the most abstract sense, the solution to this problem has the same *objective* as that underlying competition policies: the efficient allocation of resources. Unlike the solutions to problems rooted in the exchange of goods, however, this solution has at its core the *stimulation of investment*. But the *regulation of investment* differs fundamentally from the regulation of trade; an efficient investment policy does not look like an efficient trade policy. The *benchmarks* of the latter – "market power" and Athe competitive level" – may not be implementable or even defined in the former. We discuss analogous benchmarks in an IP setting characterized by uncertain investment over time.[6] Because our main purpose lies in exposing the different assumptions, objectives, and instruments of IP and competition policies, we illustrate these differences with examples from the Draft Guidelines and provisions of the *Competition Law*.

Seven Conflicts

The tension between competition and IP policies derives from seven conceptual conflicts:

1. *Theoretical efficiency*. The system of IP laws constitutes what economists call a "second-best incentive mechanism": even in theory, one cannot hope to achieve first-best efficiency, as one can in a static market for goods. This fundamental problem derives from the public goods nature of the new information that R&D produces. A pervasive problem with making policy prescriptions in a second-best world is that "doing the right thing" (*i.e.*, removing some but not all of the impediments to achieving the first-best world) can make matters worse, not better.[7]
2. *Price vs. investment*. Applied competition policy focuses on the relationship between price and cost within a relatively short period, while IP policy focuses on investment, which by definition occurs over time.
3. *Quantity vs. quality*. It would overstate the case to say that competition policy seeks greater output while IP policy seeks improved quality. To the extent that the generalization holds, however, we observe that it is IP-induced, "quality-adjusted" prices and quantities that must be subjected to competition analysis. Both as matters of theory and of regulation, we are aware of no standard for adjusting Asignificant and non-transitory price increases" for improvements in quality. And as an empirical matter, the accurate

---

[6] We do not, however, view our role as offering substitute guidelines; we are agnostic as to whether consistent guidelines even exist.

[7] A general survey of policy problems associated with the "theory of the second-best" may be found in C. Blackorby, "Economic Policy in a Second-Best Environment," *Canadian Journal of Economics 23*(4) (November 1990), 748-71. A specific example of first-best failure in the case where firms' investment and the procurement mechanism are chosen simultaneously is provided in M. Piccione and G. Tan, "Cost-Reducing Investment, Optimal Procurement and Implementation by Auctions," *International Economic Review 37*(3) (August 1996), 663-85.

computation of quality adjustments is a vexing empirical problem, particularly when quality has multiple dimensions but even more so when whole new categories of goods appear and disappear within a relevant market.[8]

4. *Constraint vs. subsidy.* Competition policy primarily constrains agents in their pursuit of private gain through functioning markets; IP policy subsidizes private gain to achieve public objectives in response to potential market failure.
5. *Uncertainty.* The uncertainty of industrial research – which IP policy seeks to mitigate – necessarily endows the regulatory environment with fewer facts, and more limited instruments, than is the case in (say) merger analysis.
6. *Standards of review.* Given its intrinsic uncertainty, and the powerful dynamic effects of precedent on future investment paths, the optimal IP policy generally is optimal *in expectation* (*ex ante*), rather than optimal *in every case* (*ex post*), a legal standard to which competition authorities justifiably are held.[9]
7. *Unknown objectives.* Finally, it must be admitted that even where the limits of mechanism design and incomplete information do not foreclose principled regulatory positions *a priori*, economists and policymakers remain ignorant of the efficient means to combine the objectives of competition and IP policies, even in theory – nor have they succeeded in articulating or quantifying the tradeoffs to the legislative branch so as to permit the balancing of constituent interests. For example, does a society prefer a high-growth (in expectation), high-monopoly-risk strategy to a low-growth, low-monopoly risk strategy?

Efficiency and Intellectual Property Policy

It is generally agreed that the IP laws have as their main objective to promote "progress,"[10] by which we as economists mean economic growth. Economic growth has several sources, but clearly a main source is productivity increases that derive from cost-saving innovation and new products that are

---

[8] A clean and compelling example of the mismeasurement of price indices using new goods—even when quality remains constant by definition – is given for the case of entry by generic pharmaceuticals in Z. Griliches and I. Cockburn, "Generics and New Goods in Pharmaceutical Price Indexes," *American Economic Review* 84(5) (December 1994), 1213-32.

[9] For example, IP policy is not generally concerned when a patentee *realizes* a greater or lesser reward than he might have expected or than would have justified his investment. The United States Supreme Court has explicitly rejected any measure of inputs as the appropriate measure of reward, both in the case of patents (cite) and copyrights (*Feist* v. *Rural Telephone*, rejecting so-called "sweat of the brow" protection for databases). By contrast, the *realized* – not just the expected – relationship between price and cost is very much the concern of competition authorities. The outcome of litigation turns not on whether the party exhibiting the challenged behavior *expected* to obtain market power, but whether he did (or will) in fact.

[10] United States Constitution, Article I, section 8, cl. 8.

preferred to old. The main source of such productivity increases is private research and development.

Even in theory, the measurement and control of economic growth are inexact for diverse reasons. We observe simply that no one knows how much private R&D is required for "optimal" economic growth.[11] By necessity, then, no one knows whether the Canadian auto industry, or Canada generally, or the world as a whole under- or over-invests in R&D. While most macroeconomists would argue that underinvestment is both more likely and more problematic, the answer is not so clear at the level targeted by competition authorities: individual markets in individual countries. It is well known that patent races can lead to *over*-investment in R&D by industry participants. Depending on the nature of transnational research "spillovers," it may be better at the margin for one industry or country to free-ride on another's R&D rather than to subsidize its own R&D by offering IP rights equal to its neighbor's.[12] Under these circumstances, whether it remains an open question whether "society" is operating above or below the "efficient" level of R&D.

Even if the level of R&D were optimal in the abstract, it also matters from whose perspective efficiency should be measured. This conflict goes beyond multi-jurisdictional settings (as exemplified by transnational R&D spillovers) and upstream-downstream differences of opinion as to whether prices are too high or too low; these are familiar problems in competition policy. For example, the preferred allocation of R&D as between incumbent and challenging ("evolutionary" vs. "revolutionary") technology may depend on consumer types. Consumers with high discount rates who adopt early and are locked in to the status quo generally prefer investments that complement their own, while consumers that have yet to adopt may prefer next-generation technology.[13] Indeed, in a fully specified dynamic model with a continuum of consumers, a consumer's decision to adopt is itself endogenous: the marginal consumer is indifferent between waiting for the next generation (with its expected stream of innovations) and purchasing the current generation (with its own stream of innovations). Obviously, any applied setting will produce consumers of both sorts, each of whom may be expected to argue that the actual market R&D allocation is not optimal, even if its level is. Since firm-specific R&D is not tradable *per se*, either among firms or between firms and consumers, it is not susceptible to reallocation using market mechanisms.[14] And – to anticipate a later point – because no one knows the outcome of these R&D expenditures, what appears to be an optimal

---

[11] N. Stokey, "R&D and Economic Growth," *Review of Economic Studies* 62(3) (July 1995), 469-89, compares first- and second-best R&D levels in competitive economies, and finds that the competitive level is sensitive to the form of substitutability among products and so can vary dramatically within a family of consumer preferences.

[12] Of course, a nation's optimal IP policy must also be evaluated both in light of its obligations under the WTO, which include a commitment to threshold IP protection, and in light of reciprocal trade retaliation for perceived deficiencies in protection.

[13] In the United States, these irreconcilable views have figured prominently in *U.S. v. Microsoft*.

[14] Insofar as its R&D level is determined by a firm's sales, then of course R&D allocation is subject to market discipline. But this may exacerbate rather than mitigate the problem: insofar as market sales are tilted towards the incumbent, so will be market R&D.

allocation of R&D resources *ex ante* will prove suboptimal *ex post*: faced with the actual inventions generated by the R&D, some consumers who waited will wish they hadn't, and perhaps vice versa.[15] In litigation, those disappointed in hindsight (from both sides) will materialize to blame the other. An economist would say that they've made their beds and should lie in them.

In theoretical analyses, economists resolve these problems by making assumptions about the distribution of consumer types, their discount rates, and the distribution of evolutionary and revolutionary R&D outcomes. The efficient policy achieves the dynamic path that maximizes expected social welfare over multiple generations of R&D. Unfortunately for policymakers and empirical economists, it is not feasible to determine where on the dynamic path any given antitrust market is at any single point in time, nor whether that path is efficient.[16]

Since our specific objective is to contrast IP with competition policy, we warn against the observation that all regulation is fraught with empirical difficulties, so one may as well plunge ahead in the face of epistemological imperfection. The issue here is not empirical, but conceptual. Applied competition policy defines relative efficiency primarily in terms of price and output; lower prices and higher output are better. Applied IP policy deliberately turns this view on its head: *higher* (nominal) prices and lower output are better at a single point in time, thereby stimulating R&D to achieve a better *path* of (quality-adjusted) prices (and product mix) over time. Thus, as a matter of regulatory first principles, one must decide whether one wishes to raise or lower prices.

The additional empirical difficulties arise because IP policy demands that one approach a candidate market intertemporally. Not only are *future* prices unknown, but one's view of whether *present*prices are too high or too low depends on the (unknown) investment and future products that they will induce. Thus, faced with an allegation that a given IP-based action results in prices that are "too high," the respondent's appropriate question is, "Relative to what?" The Draft Guidelines are silent on this basic question.[17]

---

[15] If quality is multi-dimensional, it is likely that some of both the "early adopters" and the "wait-and-seers" will be disappointed *ex post*.

[16] We note in passing the role played by R&D spillovers to and from firms that fall *outside* the definition of the relevant antitrust market. To be rigorous, however, competition analysis should not ignore the effects of one industry's research on another's outcomes, as these effects may be substantial. In particular, Canada is likely to be a major recipient of R&D spillovers. D. Coe and E. Helpman, "International R&D Spillovers," *European Economic Review 39* (5), (May 1995), 859-87; F. Lichtenberg and B. van Pottelsberghe de la Potterie, "International R&D Spillovers: A Comment," *European Economic Review 42*(8) (September 1998), 1483-91; M. I. Nadiri and S. Kim, "International R&D Spillovers, Trade and Productivity in Major OECD Countries," *NBER Working Paper #5801* (October 1996); J. Putnam, *The Value of International Patent Rights*, unpublished Ph.D. dissertation, Yale University, 1996. The intranational effects of R&D spillovers between markets are analyzed in A. Jaffe, "Technological Opportunity and Spillovers of R&D: Evidence from Firms' Patents, Profits, and Market Value," *American Economic Review 76*(5) (December 1986), 984-1001.

[17] The Draft Guidelines do make several references to "market power" and "the competitive level," about which we say more later. Leaving aside our later critique of these constructs, we point here to a more basic problem: the Draft Guidelines make no provision for the possibility that an increase in "market power" may be welfare-improving, because

The Stimulation of Investment

An often-overlooked distinction between physical goods and intellectual property is the relationship between investment and ownership rights. In the case of physical goods, one primary social justification for creating real property rights is that they protect investments by owners in property *improvements*. That is, property rights precede investment. In the case of intellectual property, however, there is no property right until after an investment is made, and that investment must generate a particular outcome (e.g., patentable or copyrightable subject matter). The primary justification for IP rights is property *creation*; investment – successful investment – precedes property rights.

This basic difference leads to basic misunderstandings regarding IP and its interpretation under competition policy. Two examples suffice. First, the property rights created by IP policy are not like the rights created for real or personal property. The *Patent Act* does *not* grant "the exclusive right to use Y the invention," as stated in the Draft Guidelines.[18] Rather, a patent grants its owner the (negative) right to exclude others from using his invention. Unlike the owner of real or personal property, the patentee has no affirmative right to use his invention; he may himself be excluded by someone else's property right. The absence of an affirmative right to use one's own property leads in general to bargaining with one's "neighbors" in technology space. Technology competition being what it is, one's closest neighbors are most likely to be one's chief competitors. While the Draft Guidelines recognize the existence of such horizontal relationships, and also recognize the efficiency gains that may result from coordination, they do not recognize that trade in rights among owners who do not have a right of use is not analogous to trade in real or personal property. In any bargaining situation, the owner of real property that carries right of use always has the outside option of walking away and offering his property to another for its next-best use. By contrast, an IP owner may have no option other than to obtain a license from the one who can exclude him. Given its relative homogeneity and its implied right of use, physical property tends to trade in markets that are relatively "thick" – an important condition of efficiency. IP, being idiosyncratic by definition, tends to trade in relatively "thin" markets. One might conjecture that competition authorities should adopt a less stringent standard when reviewing IP agreements between parties that, despite these obstacles, manage to negotiate market-based deals.[19]

Second, the "critical fact" of IP rights is emphatically *not* that they "create something that is tradable," as the Draft Guidelines contend.[20] "part from the implied ambiguity (is the tradable good the new product or the IP right itself?), the critical fact of IP rights is that they stimulate research investment (which is not tradable, at least not easily). This additional investment generates new information, which, in expectation, improves economic growth. In other

---

it leads to a better path of investment and prices. Yet, it is precisely by such increases in market power that IP policy stimulates investment at all.

[18] Draft Guidelines, para. 10.

[19] There may be grounds for more stringent review as well. Our point is that the same presumptions should not be applied to trade in IP as are applied to trade in physical goods.

[20] Draft Guidelines, para. 10.

words, competition policy takes the existence of a tradable good for granted, and regulates the terms of its exchange. The *sine qua non* of IP policy, however, is that new goods eventually do or do not come into existence in response to its incentives. The "critical fact" of IP policy is that good policies promote the right rate of technical change, with the optimal (in expectation, but not necessarily in fact) prices, number of goods, and market structure. Bad policies do the opposite. The Draft Guidelines do not contain even the theoretical acknowledgment that an irreducible set of activities that allegedly contravene the competition laws at any given point in time may have resulted from an IP policy that induces the optimal production of new goods in the aggregate over time.

The Regulation of Investment

More specifically, policies that regulate *trade* in new goods (and the IP rights that govern them), without recognizing their effect on the *creation* of those goods, may be "dynamically inconsistent." For example, suppose in a two-period world that IP policy stimulates research in the first period, which results with some probability in a good and IP rights that are traded in the second period. If the application of competition policy to trade in the good and/or IP reduces the IP holder's profits sufficiently that – had he known of it in the first period – he never would have invested, then the policies as jointly applied are not dynamically consistent. The Draft Guidelines demonstrate no awareness of this essential policy requirement.

This point deserves elaboration. In a non-repeated two-stage game between inventors and the government, it is always optimal for the government, representing the interests of consumers, to promise in the first stage a reward (say, market exclusivity) to a successful inventor, then to renege in the second stage once the invention is created, by permitting imitators to drive price down to marginal cost. Foreseeing the government's temptation to deviate from its announced policy, rational inventors will not invest. In a repeated game, the government demonstrates its long-term commitment to growth by repeatedly foregoing its short-term incentive to renege; the government's continuing investment in its reputation justifies inventors' continuing investment in R&D. If the government deviates from its announced policy, inventors recalculate the probability of deviation and adjust (downward) their investment behavior and expectations of returns accordingly.

In applied terms, this game shows that the competition authority, which regulates trade in the second stage, always has the incentive to renege on the investment promise made by the IP authority in the first stage. From a political perspective, this incentive may be especially strong because the challenged IP holder probably will have enjoyed considerable market success ("high prices"). Yet if the competition authority's intervention shifts downward the distribution of returns that other, future IP holders can expect, it will have succeeded in stunting long-term growth even as it "helps" consumers in the short term.[21] If there is to be two-stage harmony between the two policies, it is *despite* the divergent one-stage interests of the two authorities.

---

[21] A reduction in welfare follows as long as the announced policy has not induced research above the optimal level in the first stage.

The explicit *lack* of commitment by the Bureau to preserving the *ex ante* distribution of returns to R&D shows that our concerns are not idle. One of the conditions cited by the Draft Guidelines as grounds for referring a matter to the Attorney General under section 32 is that "the market power sustained by the IP is incommensurate with the risk and innovative effort expanded in its creation."[22] Thus, for an IP holder satisfying the three conditions outlined in para. 55 of the Guidelines, the mere fact that his rate of return exceeds some undefined threshold may expose him to criminal prosecution. This provision clearly signals a truncation in the right (high returns) tail of the returns distribution, with the truncation point evidently to be determined case-by-case by future courts. It should be evident that this truncation of returns is asymmetric: a spectacularly unsuccessful firm, which draws a return from the far *left* tail, elicits neither sympathy nor subsidy from the Bureau of Competition.[23] Under these circumstances, we can safely conclude that, contrary to its stated intentions, the Guidelines *reduce* the mean return to R&D, while *adding* to a firm's uncertainty.

More generally, the Draft Guidelines make no provision for analyzing the aggregate industry research effort (incorporating the expenditures and failures of others) as the investment base upon which to measure the successful IP holder's supposed excess return – yet it is this aggregate investment that was induced by the announced IP policy. In other words, the winner's supposed excess returns must, from a social perspective, be weighed against the losers' sub-normal returns. In the next section, we provide a simple example to illustrate this point.

Competition Benchmarks and Intellectual Property

Perhaps the most nitty-gritty difficulty with the Draft Guidelines is their borrowing from the Merger Enforcement Guidelines terms that, without further refinement, carry no content in a dynamic investment setting. The most prominent of these are "market power" and "the competitive level." The Draft Guidelines hearken back to the MEG in defining market power as "the ability of firms to profitably cause one or more facets of competition, such as price, quality, variety, services, advertising, or innovation to significantly deviate from competitive levels for a sustainable period of time."[24] Note first that the "competitive levels" of any "facet of competition" are never defined in the Draft Guidelines. Next, even the simplest and most widely observed competition facet – namely, market price – *lacks* a "competitive level" in an IP context, if "competitive level" refers, as it does under competition law, to the deviation of price from production cost. Given that the objective of IP policy is to *cause* price to deviate from cost in order to reward (prior) investment, the only reasonable inquiry is whether such deviation has resulted in an "excessive" return on the investment. In other words, both the "competitive level" and non-transitory deviations from it

---

[22] Draft Guidelines, para. 55.

[23] Such a party might be able to assert a "failing firm" defense to a merger challenge, but that would be fortuitous.

[24] Draft Guidelines, para. 14 [footnote omitted].

("market power") can only be defined in terms of rates of return, not price-cost markups.[25]

Even that much awareness would go some distance towards re-orienting the Draft Guidelines in a direction appropriate to the regulation of investment activity. But it would not go all theh way. As intertemporal issues intrude on benchmarks, they become increasingly difficult to apply. In order to determine the competitive level of *investment*, one must look to a firm's (prior) "investment competitors," not to its (present) production competitors. That is, firms compete in capital markets for access to funds with which to conduct research. *Ex ante*, the appropriate competitive level is the return the firm's capital could have earned in its next-best use.

Example 1: Two identical firms each invest $100 on R&D in period one. The winning firm earns $250 in the next period while the loser earns $0. Nature randomly chooses one of the two as the winner, with probability 0.5. The table below shows the possible payoffs.

Outcome	Probability	Firm A	Firm B
1	0.5	$250	$0
2	0.5	$0	$250

Each firm's *expected* rate of return is 25% (=[0.5 x $0 + 0.5 x $250]/100 - 1), but the winner's *observed* rate of return, however, is 150% (=$250/100 B 1). If each firm's cost of capital is 25%, then the winner has only broken even on its investment, though it will appear (under the Merger Enforcement Guidelines) to have "market power" – that is, to have charged a price above "the competitive level." If, after the fact, the winner's profit were reduced at all below $250, it would have been better for him to have invested his capital elsewhere. As previously noted, such a reduction would be dynamically inconsistent. Its effects, however, would be felt on *future* performers of R&D; *present* consumers of the new good at its newly reduced price would cheer. In some cases, one can compute the rate of return earned by a given R&D project (such as a small firm that wins a discrete patent race) and compare it to returns on similar investments, but even this is problematic. In Example 1, nature picked a winner with certainty; the only unknown was which firm it would be. If one computed the *industry's* return ($250) on its *aggregate* investment ($200), one would obtain the expected rate of return for the individual firm. More realistically, there may be no winner.

Example 2: Two firms invest $100; the winner receives $300. As in Example 1, each firm has a probability of winning of 0.5, but winning is independent across firms. For simplicity, suppose that if both firms win, they each earn $200 in the second period.

Outcome	Probability	Firm A	Firm B
1	0.25	$0	$0
2	0.25	$200	$200

---

[25] This point is covered more generally in F. M. Fisher, "On the Misuse of the Profits-Sales Ratio to Infer Monopoly Power," *Rand Journal of Economics 18*(3) (Autumn 1987), 384-96.

3	0.25	$0	$300
4	0.25	$300	$0

Again, each firm's expected return is a breakeven 25% (=[0.5 x $0 + 0.25 x $200 + 0.25 x $300]/100 B - 1). Not only is the winner likely to attract regulatory attention with its 200% return, but even if there is "adequate competition" (both firms "win"), the observed rate of return is still 100%.

The regulatory issue here is that no one knows what each firm's probability of success was prior to undertaking its investment. When confronted with a high (historically or cross-sectionally speaking) observed return, the competition authority has no principled method, even in retrospect, of determining the *ex ante* expected value of the investment, hence no grounds for stating that the observed return implies a deviation from the competitive investment level.

One might hope to index a firm's probability of success by the number of firms with which its research competes. In fact, it may not be possible to determine with whom a firm is competing today until the product markets have sorted themselves out tomorrow (if ever). One cannot tell today the extent to which telecom firms are competing with information technology firms for future "voice and data" markets; even when those markets appear, it will be difficult to say in retrospect which investments were "competitive" in the sense of being directed to acquiring a given market outcome for one firm at the expense of another.

We end this section by pointing out that these same basic conceptual difficulties appear even in the analysis of "unilateral effects." It is straightforward to extend the two-firm argument to a single firm's research program at two points in time, or to a single firm's portfolio of research projects at a single point in time. That is, today's gusher may only just offset the dry hole drilled yesterday or tomorrow or in the next town. By singling out a successful firm or project for review under the Draft Guidelines, the Bureau of Competition biases its investigation toward a finding of market power to the extent that it omits investment failures from its computation of the competitive investment level.

On the other hand, if there are no barriers to R&D, we would expect other market participants to discriminate accurately (in expectation) between real and illusory market power, and to increase their R&D spending in the event that economic profits actually exist. In expectation, these expenditures will erode all participants' returns to R&D to their "competitive level."[26]

Horizontal Effects and the "Least Restrictive Means"

In closing, we illustrate our critique with two further examples. First, the Draft Guidelines state that "[i]n evaluating the competitive effects of conduct that involves an IP right, . . . the Bureau's assessment focuses on whether the conduct

---

[26] It is beyond the scope of this paper, but well-known in the economic literature, that free entry until the point at which R&D earns a competitive return actually represents a socially inefficient *over*-investment in R&D in the aggregate. It would, however, seem to be a perverse position on the part of the competition authorities to take the view that increased scrutiny under the competition laws increases efficiency by decreasing the incentive to conduct R&D.

will result in horizontal anti-competitive effects. Conduct has horizontal effects in a market if it has consequences for firms producing substitutes or firms potentially producing substitutes."[27] Consider the following example. Suppose that Firm A has patents on two goods, 1 and 2, that are substitutes. Firm A finds it optimal to market 1 and to withhold 2, which would cannibalize 1's sales. Suppose Firm B obtains improvement patent 3 that improves the quality of both 1 and 2. Firm B cannot practice 3 without a license from Firm A. Here is the question: is there any license arrangement between Firms A and B that preserves the rewards due to each firm's investment, and that does not contravene paragraph 46 of the Draft Guidelines? It appears there is not. Any license that restricts either party's ability to compete on price (as would a running royalty) – particularly if the royalty is the same for both firms – risks a charge of price fixing or price maintenance. More importantly, any provision that has the effect of keeping the 2-3 combination off the market (as would the standard single rate for the 1-2 patent portfolio) would appear to be a "reduction in competition." Of course, the parties could cross-license nominally or freely, but such an arrangement would fail the IP policy requirement that the licenses earn for their owners adequate returns on their investment in R&D.

As for the "least restrictive means" test: "the Bureau will also consider whether there exists a means of achieving those efficiencies which is less harmful to competition. If such an alternative exists, the anti-competitive effect of the transaction or conduct will be compared to this alternative."[28] The problem here is that the "efficiencies" test of IP has to do with its reward for past and future investment, not with the current terms of exchange. It may very well be the case that the more efficient means of stimulating investment is the one that "harms" current competition the more, because (by definition) it replaces a proposed price and investment path with a (socially) superior one. Once again, the notion that lower prices and higher output are *necessarily* superior at any given point in time is antithetical to the basic objectives of IP. The appropriate efficiency test is – always – whether the static welfare loss resulting from higher prices is worth the dynamic welfare gain from an improved product mix. By definition, then, the "least restrictive means" of achieving the optimal dynamic path is the socially superior long-term alternative. Whether those means raise or lower current prices is, absent further analysis, largely beside the point.

---

[27] Draft Guidelines, para. 46.
[28] Draft Guidelines, para. 53.