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Why We Should Stop Worrying and Learn to Love Spectrum Windfalls

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Many attempts to increase the flexibility of wireless spectrum rights meet objections that the method of reallocation will result in a windfall for corporate license holders. Far from being objectionable, however, allowing windfalls in spectrum reallocation creates virtuous incentives.

KEY TAKEAWAYS

- Past restrictions on the supply of flexible-use rights to spectrum have resulted in a rigid system, which is not in the public interest because the most productive uses of spectrum change rapidly. Nevertheless, this status quo is difficult to unravel.
- Processes that could increase the flexibility that is necessary for efficient spectrum use often produce "windfalls" by giving incumbents large paydays or valuable licenses. Many find these outcomes objectionable.
- Yet the prospect of a windfall creates the incentive to use one's spectrum efficiently enough to free up all or part of it for other uses and to volunteer restrictive licenses for reallocation, both of which benefit the public.
- Though some legal maxims disfavor windfalls, the laws and precedents applicable to spectrum reallocation permit spectrum arrangements that produce them.

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INTRODUCTION

Windfalls—large, unexpected economic gains reaped by one member of a transaction—are often singled out by opponents as a reason to avoid certain methods of reallocating radio frequencies from restrictive licensing regimes to more flexible ones.

Objections to corporate license holders gaining windfalls in spectrum proceedings have come from prominent voices. In the recent reallocation of the lower C band, in which satellite companies were paid to clear space for flexible-use licenses, public interest groups and U.S. senators alike condemned the payments as windfalls.[1] The ongoing reallocation of the 2.5 GHz band has been accompanied by accusations of windfalls reaped by holders of long-term leases at the time of liberalization.[2] Likewise, a brewing proceeding on the 12 GHz band has prompted preemptive warnings not to allow the incumbent holder of more restrictive licenses to realize a windfall if licenses are liberalized.[3]

These cases are good examples of the two types of windfalls that attract ire in spectrum policy. In the case of the C band, the windfall was a large payment made to an incumbent holder of a restrictive license, made in return for the cessation of service in a part of the band that could then be reallocated to flexible use, today usually 5G services. In the case of 12 GHz, the windfall is less direct: Replacing the use-restricted rights of an incumbent with more valuable flexible-use licenses gives the incumbent either a valuable asset for sale or a competitive advantage over rivals who had to pay billions of dollars for similar rights.

While objections to both types of windfalls provoke understandable feelings of unfairness or dismay at seeing one's political or business rival prosper, policymakers should not prevent them. In fact, allowing such windfalls is beneficial to the public interest in a productive spectrum ecosystem. Furthermore, spectrum windfalls are not disfavored or illegal under relevant equitable principles and applicable precedents.

THE ECONOMICS OF WINDFALLS

Rights to transmit on radio frequencies have a long and tortured history.[4] In general, however, 20th-century spectrum policy was characterized by restrictive licensing that resulted in inefficient distribution and use of a scarce resource.[5] Now, policymakers have realized that flexible spectrum rights distributed by market processes offer immense benefits over rigid licenses and command-and-control governance by the Federal Communications Commission (FCC). This realization, however, has proved easier to understand than it is to implement. Most debates about windfalls in the context of spectrum are the remaining vestiges of the inefficient command-and-control regime hobbling attempts to unwind its harmful effects.

The Transitional Gains Trap for Flexible-Use Spectrum

Spectrum reallocation exhibits attributes of what economist Gordon Tullock dubbed a "transitional gains trap."[6] In Tullock's model, a government policy that imposes restrictions on the supply of a good confers substantial benefits on people who happen to be producing the good when the policy was enacted. These producers are usually grandfathered into the new regime and thus can earn monopoly rents.

The quintessential example is taxi medallions that limit the number of taxi cabs allowed in New York City: A limitation on new entrants is great for existing taxi drivers when the regulation is imposed. They now have protection from competition and a medallion that is set to become a valuable asset (at least until the advent of ridesharing apps). But note what happens next: When the taxi company sells its medallion to someone else, the buyer will pay a hefty price for it. Indeed, we would expect the buyer to pay the net present value of the income this artificially limited asset will produce. In a competitive market, this price would completely erode any benefit the buyer gets from being one of the special few taxis in a city where they are in high demand. Instead, the initial medallion owner claims the benefits, and subsequent buyers reap only normal returns.

Flexible-use licenses are quite productive but, because so much spectrum has been allocated to restrictive licenses, too few in number.

Society, however, still pays the inflated price caused by the restriction on supply. Perhaps policymakers would like to remove this barrier to benefit consumers, but current medallion holders will fiercely protest their attempts. Not only would those medallion holders lose their protection from competition, but they also haven't reaped the supra-normal returns a monopolist would normally enjoy. Instead, those *gains* accrued to the initial medallion holders in the *transition* to the medallion system long ago. Therefore, the current holders of medallions have an enormous incentive to resist any change to the system. Meanwhile, those who would benefit from the unwinding of the regime are dispersed and have difficulty forming a comparable political coalition.

Applying this framework to spectrum rights reveals a similar pattern. Flexible-use licenses are quite productive but, because so much spectrum has been allocated to restrictive licenses, too few in number. This combination has led to incumbent licensees paying top dollar whenever flexible-use licenses come on the market. The recent C-band auction, for example, yielded over $80 billion in bids. These bids represent the net present value of the licenses, since otherwise,

someone else would have bid more. Incumbent holders of flexible-use licenses now do not realize full monopoly rents on their licenses; they already had to pay them upfront. In this way, a potential competitor getting its hands on new flexible-use licenses is a competitive disadvantage to the incumbents, in the same way that purchasers of expensive taxi medallions would suffer a competitive disadvantage if the city decided to increase the number of medallions. This is why attempts to reallocate a previously restricted band to flexible use meet with staunch political opposition. And one of the common arguments of opponents is to decry the benefits of the reallocation as a windfall: The new licensee gets either a big payday or a valuable license without the sacrifices made by other companies who paid for their rights.

How to Escape the Trap in the Public Interest

And so the transitional-gains trap continues: Everyone can see the benefits of getting out of it, but policymakers have appeared sympathetic to clever-sounding arguments that, among other things, the potential for windfalls renders a process unacceptable. But the FCC is bound to act in the public interest, which excludes working to protect competitors' private interests at society's expense.[7] Therefore, it is the commission's duty to escape this trap despite (or because of) the new competitive forces it might create.

If windfalls were a problem to which taxation was a solution, then the tax must have some particular benefit that could not be derived from discretionary taxes elsewhere.

To be fair, many who decry windfalls do not categorically oppose liberalizing the band in question. There are ways to deal with a windfall without stymieing the relocation altogether. The government could, for example, calculate the approximate gain conferred on the holder of the newly minted flexible-use license and tax that. The proceeds could be used to compensate companies that suffer competitive losses or, more likely, simply to assuage competitors' envy of the newcomer's good fortune by diminishing the windfall. Notice, however, that neither of these results operates in the public interest. Rather, they aim to soothe the sour grapes of competitors. Granted, the tax proceeds could go to some public-interest purpose, but that would be true of any tax levied on licensees. If windfalls were a problem to which taxation was a solution, then the tax must have some particular benefit that could not be derived from discretionary taxes elsewhere. Otherwise, the tax proposal would simply be a method of raising revenue, not an efficiency-enhancing redistribution.

Another alternative to allowing windfalls would be for the FCC to create the flexible-use licenses in place of the restricted ones but auction the flexible licenses afresh, rather than treating them as modifications of the incumbents' existing licenses. This proposal avoids the windfall since the incumbents would have to pay market price for the flexible-use license like everyone else. But here again, the outcome, from an economic perspective, is neutral: If the incumbents were simply vested with flexible use rights, then the rights would still flow to their most productive uses at market prices. That process would take place through secondary-market transactions with the incumbents, rather than payments to the government. While this would be preferrable for the incumbents' competitors, it does not appear to create public interest benefits unless the transaction costs with the FCC are lower than those that would be incurred by secondary-market transactions with the incumbents.[8] This question is worthy of study but appears doubtful on its face.

Windfalls Create Virtuous Incentives

The above analysis shows that alternatives to allowing windfalls do not have net public interest benefits themselves. If windfalls were net neutral too, then the tax or auction alternative might achieve the same result while avoiding controversy. But windfalls are not neutral. When allowed, they create virtuous incentives that can lead the way out of the transitional-gains trap and toward more efficient spectrum use overall.

First, allowing windfalls to incumbent holders of restrictive licenses that could be repurposed for flexible use incentivizes the incumbent to make investments to realize those windfalls. This includes closely analyzing their own spectrum use to see how existing services might be accomplished more efficiently, but it also includes making investments in compression and other technology that could allow the same services to exist in a smaller range of frequencies. Indeed, video compression technologies were instrumental in facilitating recent reallocations to flexible use. In the 600 MHz band, the transition from analogue to digital TV signals enabled broadcasters to move out of the way so the band could become the backbone of 4G and 5G networks.[9] In the C band, "new compression HEVC using DVB-S2X [enabled] almost all video distribution channels [to] fit in under 30% of Ku-band satellite capacity."[10] Incumbents have more reason to make such investments if windfalls are allowed for selling off excess capacity. Knowing that windfalls are there for the taking if you can economize on your spectrum usage will encourage that economizing, and reducing that windfall through taxation or reauctioning will diminish that incentive.

It is no hypothetical to suggest that permitting windfalls can get spectrum into more productive arrangements more quickly.

Incidentally, this kind of investment analysis also weakens the argument that a windfall exists in the first place. An incumbent might realize a few billion dollars from selling off its rights, but it also may have expended billions to reach the point where it was ready to sell in the first place (perhaps updating antennas or launching new satellites). Looking only at the final payment and crying "windfall!" ignores these prerequisite investments.

Second, allowing windfalls helps overcome inertia within industries and the regulatory process itself. As John Leibovitz and Ruth Milkman recently wrote,

> Over time, however, industry-specific policies may create entitlements and stifle innovation. The existence of a set of incumbents with a strong interest in maintaining their spectrum licenses tends to slow the re-designation of spectrum bands to new uses, particularly when re-designation would benefit an industry segment other than the one for which the spectrum policy was originally designed.[11]

The transaction costs of reallocating a band are often immense, especially when the incumbent services are longstanding and have little interest in changing what has always worked. While the benefits of a more flexible band may be worth it to all parties in the end, the speed and ease of the process are significant factors in the fast-changing wireless marketplace.

Allowing spectrum windfalls presents the rare case in which there could be a viable constituency for unraveling the transitional-gains trap. The windfall is a concentration of the benefits that are

usually too dispersed to marshal support for the liberalization of rights. Vesting more liberal rights with incumbents or paying them large sums to move out of a liberalized band provides an incentive for those incumbents to cooperate with the process and perhaps volunteer their bands for such treatment. Every incumbent licensee has a price at which they would move out of the way for more productive uses; it is in the public interest to find out what that price is.

It is no hypothetical to suggest that permitting windfalls can get spectrum into more productive arrangements more quickly. In the C-band proceeding, the FCC authorized "accelerated relocation payments" to satellite companies that cleared their bands quickly.[12] And indeed, mobile carriers proved willing to pay more money to get access to additional frequencies sooner.[13] Though they came after an FCC auction, these types of payments are windfalls: They are large sums paid to incumbents based solely on the historical accident of their holding licenses to frequencies that are now more valuable in others' hands. And while windfall opponents balked, the public now has faster access to more of the C band for mobile service.

Another example comes from the recent liberalization of the 2.5 GHz band. The FCC had been gradually adding flexibility to licenses originally restricted to educational purposes in those bands.[14] At one point in the liberalization process, educational licensees were allowed to lease their rights to commercial mobile providers, several of which did enter long-term lease agreements.[15] These providers were then instrumental in spurring the FCC to further liberalize the rights to the underlying licenses.[16] The lessees became a more powerful constituency for more flexible use (and against reauction) than the educational licensees would have been on their own. Subsequently, accusations of windfall have accompanied the expansion of rights that the lessees now have under the existing leases.[17] But the end result is a more productive band that can provide the services consumers use, rather than lying fallow under educational-use restrictions. Thus, the windfall facilitated a public-interest benefit.

Maximizing the productivity of spectrum should be the guiding star of a public-interest wireless policy. Incentives to do more with less of one's own spectrum and to cooperate with the liberalization of spectrum rights writ large are in line with that goal.

It is true that the FCC has de jure power to pluck licenses from the hands of curmudgeonly incumbents, but it would be facile to ignore the reality that successful reallocation often depends on the cooperation of incumbents. The FCC can flex its iron fist and shout that the public owns the airwaves, but if it ends up with only scraps of the target band and a years-long lawsuit, the public benefits of the reallocation are diminished. Policymakers must reckon with the reality that an anti-windfall policy that results in years of litigation only shifts that windfall to the lawyers involved.

Note that, unlike the alternatives to allowing windfalls (taxes and reauction), both of the aforementioned incentive structures have public-interest benefits. Maximizing the productivity of spectrum should be the guiding star of a public-interest wireless policy. Incentives to do more with less of one's own spectrum and to cooperate with the liberalization of spectrum rights writ large are in line with that goal. Therefore, policymakers should not treat windfalls in spectrum reallocation as something to avoid; if anything, they are something to encourage.

THE LAW DOES NOT BAR SPECTRUM WINDFALLS

Leaving aside the heartless world of economics, opponents of windfalls often take refuge in legal arguments where the desire for fairness for its own sake finds some support. Arguments against windfalls are often framed in terms of legality or equitability such that the FCC would be bound to prevent them even if there are good economic reasons to allow them. But this is wrong.

Admittedly, some areas of law do have equitable maxims that windfalls are disfavored, and these maxims have long pedigrees, but the term itself is equivocal. In many cases, this heuristic works: A thief who steals a wallet has a windfall gain that the law disfavors and criminalizes. The law also reasonably disfavors windfalls when, for example, they result from double recovery in a tort or contract suit; a plaintiff can only be made whole once, and it is right to prevent the judicial system from becoming a means of generating revenue beyond reasonable damages for harm.

But other windfalls are not so disfavored. Indeed, the etymology of the word itself evokes timber or fruit that has "fallen" by means of "wind" as opposed to someone's labor. Yet we do not think it impermissible for a lumberjack to benefit from a tree that fell with little effort. We may be envious of the good fortune of an entrepreneur whose idea hits it big at exactly the right time, but we generally don't expect the law to prevent that from occurring. Moreover, the law explicitly allows windfalls in some circumstances. For example, punitive damages providing a windfall that is justified by other societal benefits.[18] So while it is true that windfalls historically find disfavor in courts of equity, it is not enough to label something a windfall and purport that this alone obligates the court to prevent it. There are many forms of windfall, and not all are disfavored. As law professor A. Christine Hurt explains,

> Courts generally do not classify as a windfall a legally received payment merely because of its excessive nature, if the premise for the payment is just. Therefore, the law applies a fairly mechanical classification rule and does not label economic gains as windfalls merely out of distaste for the underlying activity, sympathy to the payor, or the unpopularity of the recipient.[19]

This proviso should be learned by opponents of spectrum windfalls who devote much of their argument to caricaturing the recipient as distasteful.

Moreover, if the economic argument above is correct, then spectrum windfalls are more often earned, or at least more socially beneficial, than is normally assumed. Recall that windfalls create incentives for incumbent licensees to push regulators toward spectrum liberalization and to economize on their spectrum use. If a windfall acts as a bounty for carrying out socially beneficial behavior, then it is not of the sort that the law should seek to diminish.

Still, since judicial review often haunts FCC policymaking, it is worth considering analogous cases and the precedent on the FCC's own authority when it comes to spectrum windfalls.

First, we may analogize liberalizing rights in a previously encumbered spectrum band to up-zoning: The owner of rights to do one thing with a piece of property has acquired greater rights as a result of a government decision. While published cases do not explicitly label the competitors' gain from up-zoning a "windfall," the petitioners' arguments in them are analogous to those who seek to prevent windfalls in spectrum up-zoning. They amount to saying that the government may not enact a policy that benefits one party because it will put competitive pressure on another.

But such arguments are rejected in zoning cases. It is the majority rule that a municipality may make zoning decisions in pursuit of the public interest, even if this results in differential effects on competitors.[20]

Other cases discussing "windfalls" from changes to zoning laws often have been brought in the context of eminent domain, where determinations of "just compensation" depend on the potential use of the land (which, in turn, depends on how it is zoned). Courts have generally been reluctant to recognize harm to landowners who bought land under one zoning regime and then claimed it should be considered more valuable because the zoning could be liberalized.[21] But these fact patterns are the reverse of the argument for disallowing windfalls from spectrum up-zoning. The argument for windfalls is not that incumbents in an encumbered band have a legal right to a private windfall. Rather, the argument is that the presence of a windfall is not itself reason enough to disrupt a reallocation scheme.

Cases on the FCC's authority over spectrum windfalls provide the commission with considerable leeway. In *NTCH, Inc. v. FCC*, the D.C. Circuit explicitly affirmed the FCC's decision to modify spectrum licenses that would remain in the hands of incumbents, rather than auctioning new licenses from scratch.[22] The court held that the FCC was "entitled to substantial judicial deference" even though "the modifications would result in an increase in value" for the incumbent since the commission concluded this was the "best and fastest method for bringing this spectrum to market."[23] The court explicitly rejected the argument that "the Commission's failure to conduct an auction" was an "undeserved 'windfall' and neglected to 'recover[] for the public' a 'portion of the value of the public spectrum resource.'"[24]

Likewise, in *Teledesic LLC v. FCC*, the court upheld a commission order that allowed an incumbent licensee to seek "premiums" in negotiating reallocation expenses, even as the petitioner decried such premiums as a "windfall."[25]

Freeing up more spectrum for flexible use should be the central goal of modern spectrum allocation. The FCC should lead boldly toward this goal by harnessing the virtuous incentives created by the possibility of spectrum windfalls.

A more complicated case is *U.S. Airwaves, Inc. v. FCC*, in which the court took issue with the fairness of the FCC's allowing winning bidders to pay less than they promised after an auction concluded.[26] Foreseeability played the key role in the court's analysis: Given the sweeping nature of the FCC's forgiveness of certain payments, the windfall to those who had debts forgiven was unforeseeable to other bidders. In other words, it is impermissibly unfair to forgive the debts of some winning bidders before payment when losing bidders would have bid more had they known such a deal was on the table.

This case is, however, distinguishable from the sort of spectrum windfalls discussed above. Barring a windfall based on an unforeseeable bait-and-switch in payment procedures within a single auction is a far cry from general reallocation policy taking place after a band has been in an encumbered state for many years. Interested parties should foresee that the FCC will likely reallocate bands in any number of ways over time. It cannot be the case that the FCC must keep an indefinite ledger of what every company would have done years ago if the allocation it now

chooses were in effect then. To make such a demand would stymie any sensible communications policy.

An administrative decision by the FCC ought to be even less constrained by maxims of equity and guided instead by the public interest. Fairness to commercial wireless companies is not the FCC's primary goal, and it would violate its statutory mandate if it forwent policies in the public interest for the sake of absolute fairness to competing companies. Furthermore, if the economic case above is right, the benefits in question are not undeserved in a manner to which equity would object. Rather, they create societal benefits in the form of increased productivity of spectrum.

CONCLUSION

As the world goes wireless, we must break through the sclerosis caused by service-specific allocations. Freeing up more spectrum for flexible use should be the central goal of modern spectrum allocation. The FCC should lead boldly toward this goal by harnessing the virtuous incentives created by the possibility of spectrum windfalls. Such windfalls are permitted by prevailing law and lead to arrangements of spectrum rights that are in the public interest.

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