The Special Problem of Special Access:
Consumer Overcharges and Telephone Company Excess Profits
(as prepared for presentation)

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Boosting Broadband Competition
Why Special Access is so Special
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1. Military Instructors are told to use a simple approach, tell 'em what you're going to tell 'em, tell 'em, tell 'em what you told 'em. Now this audience does not need that much repetition, but the topic of welfare economics is at least as obscure as the topic I was teaching – Order of Battle – that I was teaching. So here is what I am going to tell you.

2. We start from abuse. Consumers pay every dollar of the cost of special access in the cost of products that use special access services. These are a cost of doing business. They don't disappear. The Tooth Fairy doesn't pay them. They end up in the price of every good and service that the consumer buys. Econometric models that analyze GDP don't even include the cost of intermediate goods. To avoid double counting, those intermediate costs are assumed to be included in the final price.

Half the total Special Access bill is overcharges – having built up to $20 billion today. Over the past five years the abuse totals about $75 billion. The indirect macroeconomic harm of overcharging consumers is to depress demand for other goods and services, some people call it spillovers. Given the multipliers, the spillovers are at least as large as the out of pocket pain. That is at least $75 billion over the past five years. Let me be sure the numbers are clear.

There has been a steady buildup of consumer pocketbook pain to $20 billion today, which totals about $75 billion over past 5 years. An equal and additional buildup of spillovers, for a total economic harm of at least $150 billion over the past five years. Going forward, the harm starts at $20 pocketbook and $20 billion spillovers per year.

3. Why is it happening – The pain is so great because Special Access is used by a variety of suppliers of both communications and non-communications goods and services. The abuse is happening because the FCC deregulated a near monopoly under the theory that competition

would discipline the market power of the incumbents. The theory was wrong but the FCC has not had the courage to admit it and revisit the deregulation decision.

4. Theory and Method: All of the economic expert, liberal and conservative, present the same theory. My spin on the Structure, Conduct, Performance paradigm is a bit more aggressive, however. I am a devout progressive capitalist. I have argued that progressive capitalism has succeeded because it embraces the immense power of markets (that is the capitalism part), but also recognizes that they are flawed and imperfect and will fail if they are not guided by policies that create market success and prevent market failure (that is the progressive policy part).

5. We all use Standard Welfare Economic analysis which recognizes that raising prices to increase profit is the strategy that those with market power pursue.

6. We all use Routine Antitrust methods – Concentration that leads to a Small but Significant, Non-transitory Increases in Price is the concern. In antitrust analysis the concern can be raised for a 5% increase sustained over two years. By that standard, $75 billion over five years is huge.

The problem is measured with the Lerner index, which models the Markup of price over cost. The Lerner Index is linked directly to the much more widely known Hirschman-Herfindahl Index (HHI). But, remember the key ratio in the numerator of the Lerner Index– Price minus cost.

7. I also insist that we acknowledge the dynamic economic and welfare effects of the Virtuous Cycle in the Digital Economy, which is transforming the economy. Demand for applications at the edge calls forth network capacity and functionality, which allows the edge to stimulate greater demand. It is a recursive loop

8. Special Access plays an important part because it allows the digital communications revolution to spread throughout society. As the synergy phase of the third industrial revolution unfolds and the digital mode of production settles in, I believe that the standard multipliers on communications in the macroeconomic models, which have always been high, will become even higher.

Enough theory

9. The special access market is extremely concentrated, at least three times the threshold of highly concentrated recently adopted by the DOJ/FTC. It is very unlikely that it will become less concentrated over time, and certain that any improvement will take far too long. There is a simple rule in contemporary economics, four is few and six is many. I actually think the data support a more refined statement, 4 is few, 6 is okay, and 10 is vigorously competitive. All of the evidence suggests that two is not enough, potential competition is extremely weak and intermodal competition has repeatedly failed consumers.

10. The remarkable technological revolution brought on by digital technology has lowered costs at a dramatic rate. In the past thirty years the cost of a core input, communications in the information age, has come down two to three times as fast as the most famous resources of the first two industrial revolutions – cotton, heat power, light, transportation, steel, autos, electricity. Whether a fair share of those cost savings is passed through to consumers depends on the

presence of effective competition or regulation. A fair share is generally defined by the elasticity of demand, but the special access market has neither effective competition nor effective regulation.

11. While costs have been falling at a remarkable rate, prices and revenues have not. The inevitable result is

12. Excess Profits. In the paper I show that combining the declining cost network equipment, a sharp drop in the cost of capital and falling operating costs. Combining these, one would expect profits to have risen by about 18% per year compounded in the period for which ARMIS data was reported, if incumbents were pocketing the increasing margin (the price – cost numerator of the Lerner Index). The ARMIS data we have show that profits increased by 20% per year over that period. If the FCC had not stopped collecting and publishing the data, we would clearly see that the abuse has continued to grow.

13. All of this analysis and two models of harm in the record support my very conservative estimate of out of pocket harm today around $20 billion and indirect harm at least that large. My total of $150 billion for the past five years is conservative. The harm in the next five years would be much higher.

14. The record overwhelmingly support this analysis. Having told you the story with quantitative evidence, in my repetition of what I told you, I will retell the story with qualitative evidence.

The desire of the '96 Act to introduce greater competition into the communications sector and decades of rhetoric about the superiority of competition have led to neglect of important realities in communications markets. The harm that unregulated market power can impose on consumers was ignored amid the euphoric praise of competition. Premature, ill-considered deregulation has been the bane of the consumer reality since the passage of the '96 Act.

The communications sector provides a fertile ground for the abuse of market power. Its size, great importance to the functioning of the economy and underlying economic characteristics suggest that the existence and persistence of market power is a particular problem. This has made it the target of a great deal of public policy, as Kimmelman and I argued in a recent Harvard Policy Review article.

Elasticities of demand and supply are low compared to other sectors. Entry barriers are high. Deployment of facilities to compete with an incumbent communications network is costly and difficult. Network effects, the ability to reach large numbers of customers to make the network more valuable to each individual customer, are important.

The fundamental economies of scale, scope and network effects that the communications sector exhibits would have been an obstacle to competition under any circumstances, but, the '96 Act's competition policy was launched from a condition in which monopoly power existed, having been built behind decades of franchise monopoly that shielded the incumbents from competition and endowed them with a vast communications network whose sunk costs had been paid by captive consumers. The economic fundamentals combined with a ubiquitous network to give the

incumbent local telephone companies an insurmountable advantage. The difficulty of overcoming the incumbent's advantage was vastly underestimated.

In 1999, special access was one of the first services to be deregulated by administrative action after the passage of the 96 Act. Because so little time had passed, it was clear that the dominant position of the incumbent local telephone companies had not yet been weakened by competition. The FCC decision to deregulate was based on the prediction that competition would grow. Sixteen years later, it is evident that the hope and hype of competition has not been matched by reality.

The FCC totally misunderstood the situation and its analysis was exactly backwards. It worried that new entrants would game the system, holding back on entry to take advantage of the incumbent network, rather than build their own. The opposite problem was much more important. The incumbents had a huge advantage and the strong incentive and ability to manipulate the system to prevent entry. My experience in over a dozen Section 271 proceeding (in which the incumbent sought entry into long distance) made it clear that they had the desire and ability to frustrate entry.

Allowing the Baby Bells to merge with the largest long distance companies, which also happened to be the largest competitive providers of Special Access, was a huge horizontal and vertical mistake that totally contradicted the logic and intention of the '96 Act. These mergers were the final nail in the coffin of the slim chance the '96 Act had of creating a more competitive telecommunications marketplace. It is long past time to fix the problem and special access is the perfect place to start, since it plays such an important role in the digital communications marketplace..

The full paper is available at: http://consumerfed.org/wp-content/uploads/2016/04/4-16-The-Special-Problem-of-Special-Access.pdf

Slide 1

OUTLINE

Key Take Aways
- **Abuse**
- **Why is it happening**

Theory and Method:
- **Traditional Industrial Organization Analysis – Structure, Conduct, Performance**
- **Standard Welfare Economic – Raising Prices to Increase Profit**
- **Routine Antitrust – Concentration, Small Significant, Non-transitory Increases in Price**
- **The Dynamic Welfare Effects of the Virtuous Cycle in the Digital Economy**

Findings
- **Concentration**
- **Cost**
- **Revenue**
- **Profits**
- **Harm**
- **Support in the Record**

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KEY TAKEAWAY 1:

THE EXCESS COST OF SPECIAL ACCESS

About half of the total bill paid to the telephone companies for special access service, who control between five-sixths and nine-tenths of the market, is the result of the abuse of market power – *i.e.*, setting prices far above costs to earn excess profits and undermine competition.

The excessive costs are almost $20 billion per year today, and they have been building up dramatically in the last five years.

For every dollar of excess consumer pocketbook costs, there is at least another dollar of lost economic output because of the suppression of demand.

The economic burden on consumers and the economy has been growing steadily over the past five years and the total economic loss have been at least $150 billion.

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KEY TAKEAWAY 2:

WHY IS THE HAPPENING?

Special access is an intermediate good to the delivery output throughout the U.S. economy and the costs are paid for in all the goods and services consumers buy, including:

- mobile broadband and phone service
- Independent Internet Service Providers
- branch network (like ATMs or gasoline stations that have many location that need to be online all the time
- businesses like health care providers, who need to move large quantities of data between their offices, frequently in real time.

The large incumbent local phone companies have been able to abuse their market power because the FCC deregulated this market long before these was effective competition.

The FCC was incorrect in claiming that competition would quickly develop to discipline the abuse of market power.

The FCC should act swiftly to fix the this broken market so that consumer benefit.

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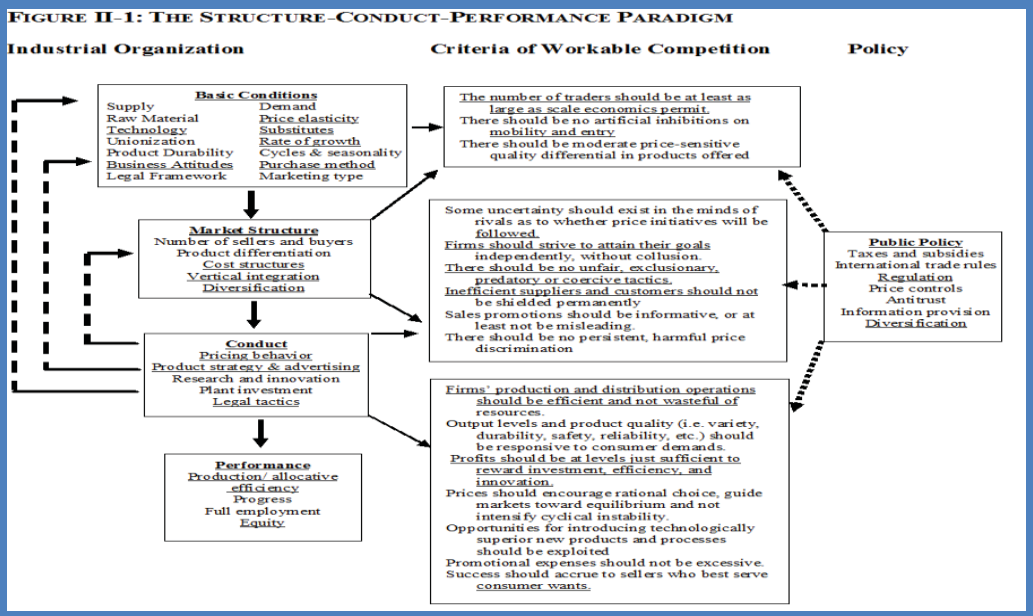

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FIGURE II-2: WELFARE EFFECTS OF THE ABUSE OF MARKET POWER

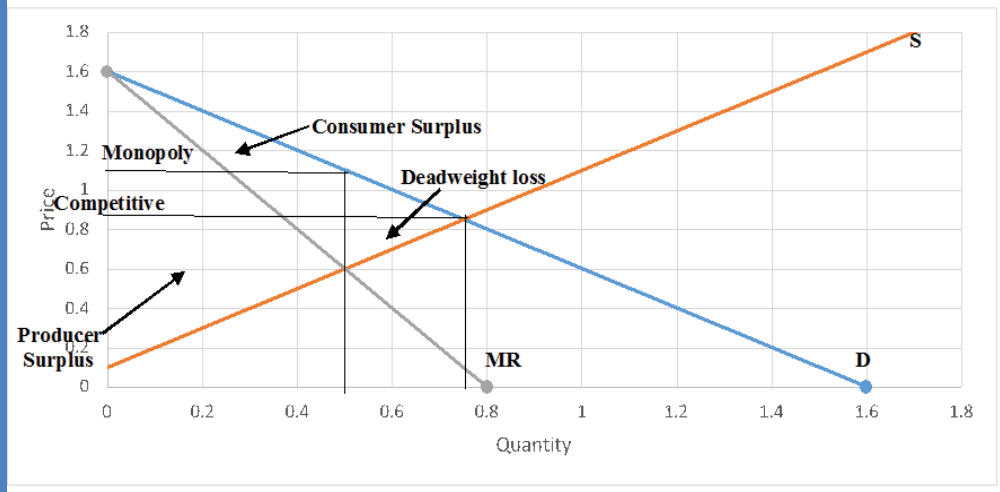

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TABLE III-1: KEY MATHEMATICAL FORMULAS IN THE ANALYSIS OF MARKET STRUCTURE AND MARKET POWER

Lerner Index Traditional Formulation

$$L = \frac{(P - MC)}{P} = \frac{1}{E^d}$$

Where: P = price, MC = marginal cost, E = the market elasticity of demand

Landes and Posner Formulation of the Lerner Index

$$L = \frac{(P - C)}{P} = \frac{1}{E^d} = \frac{S_i}{e^d_m + e^s_j \ (1 - S_i)}$$

where: S_d = the market share of the dominant firm, e^d_m = elasticity of demand in the market
e^s_j = elasticity of supply of the competitive fringe, s_i = market share of the fringe

The HHI Index

$$HHI = \sum_{I=1}^{n} s_i^2 * 10{,}000$$

Relating the HHI to Market Power through the Lerner Index

$$S_1 \frac{(P^1 - MC^1)}{P^1} + S_2 \frac{(P^2 - MC^2)}{P^2} + \ldots S_n \frac{(P^n - MC^n)}{P^n} = \frac{HHI}{10000 * E^d}$$

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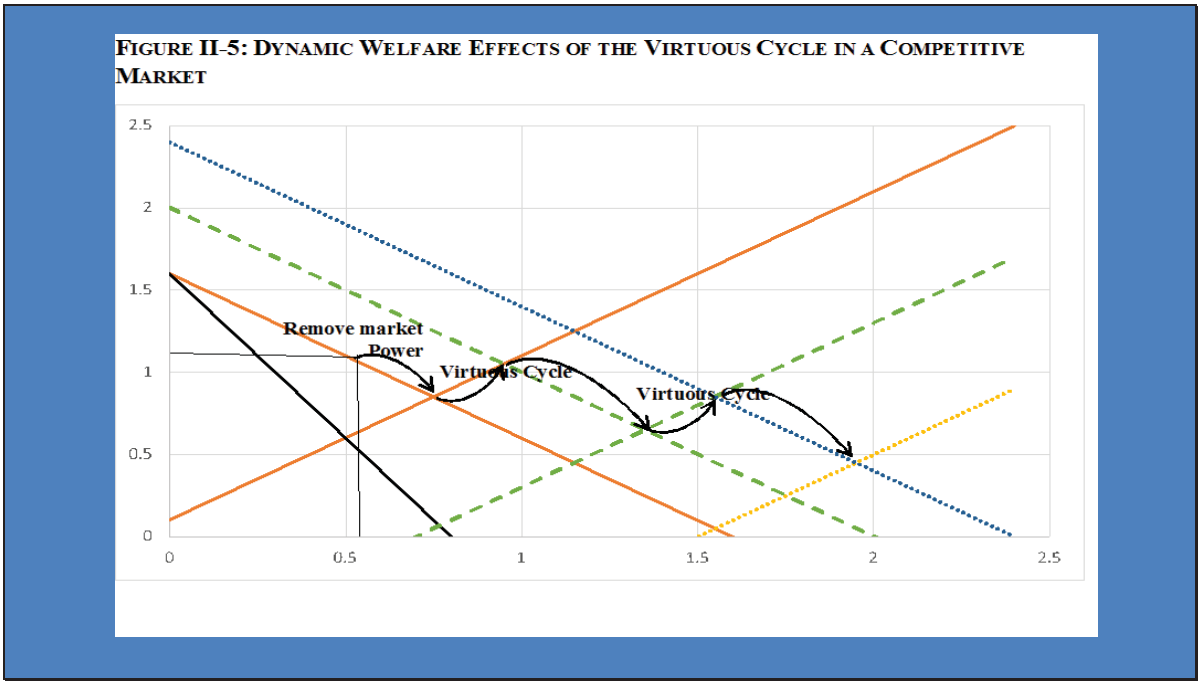

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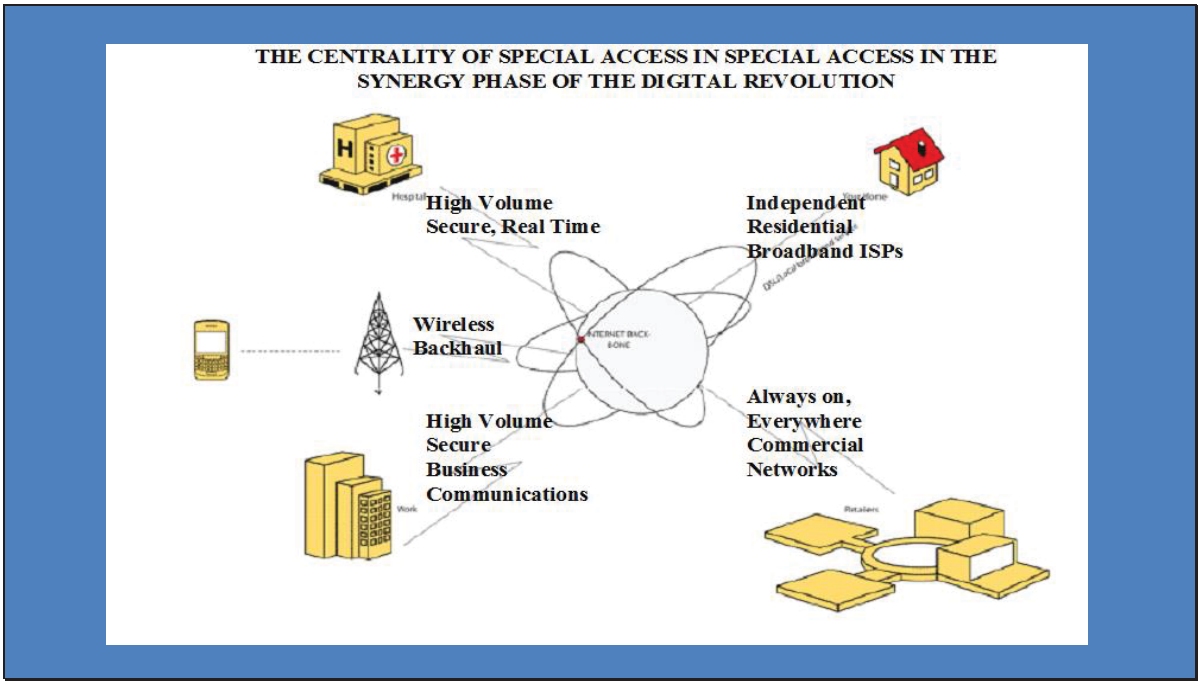

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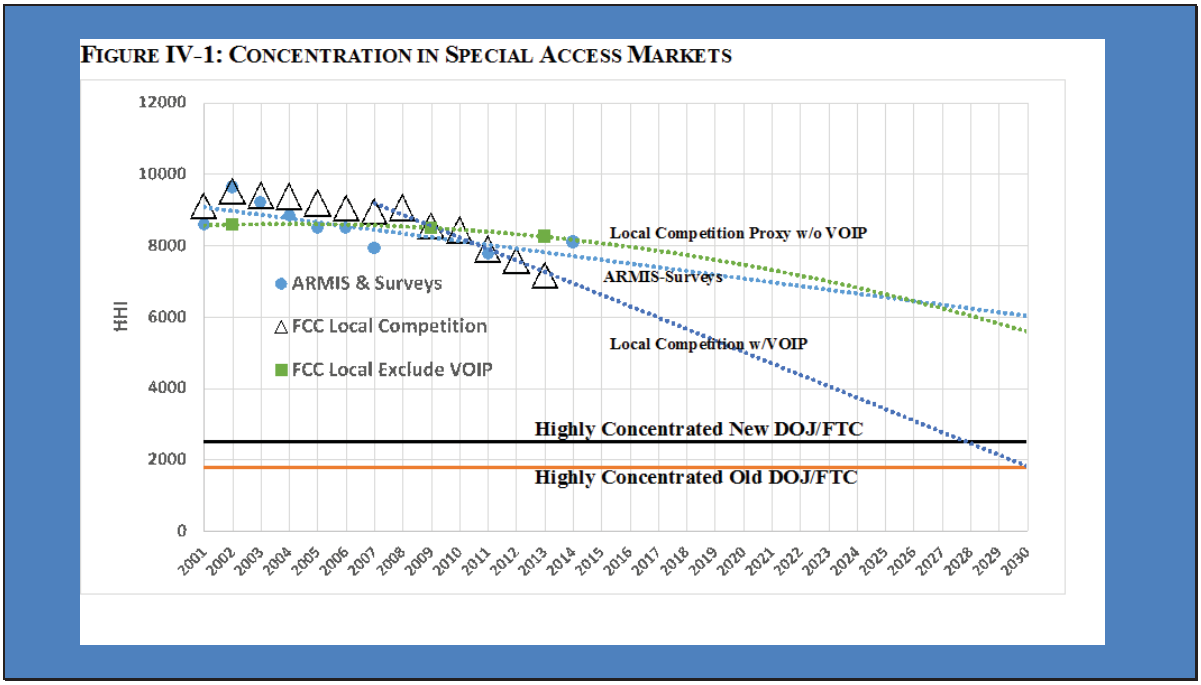

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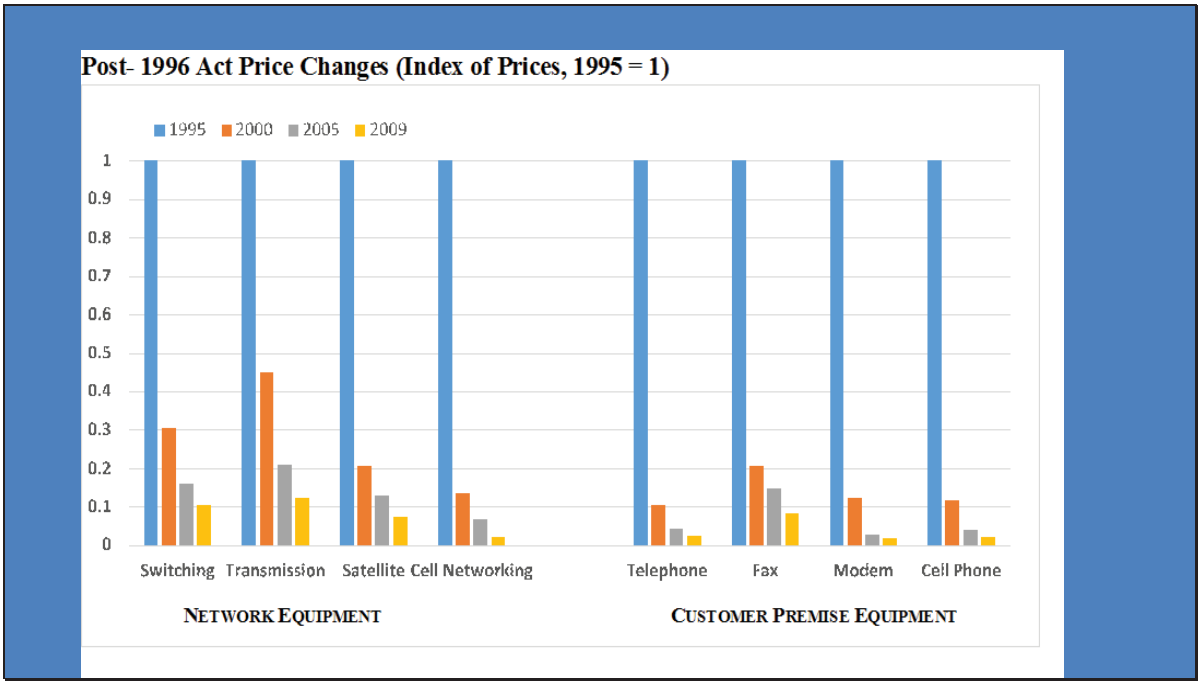

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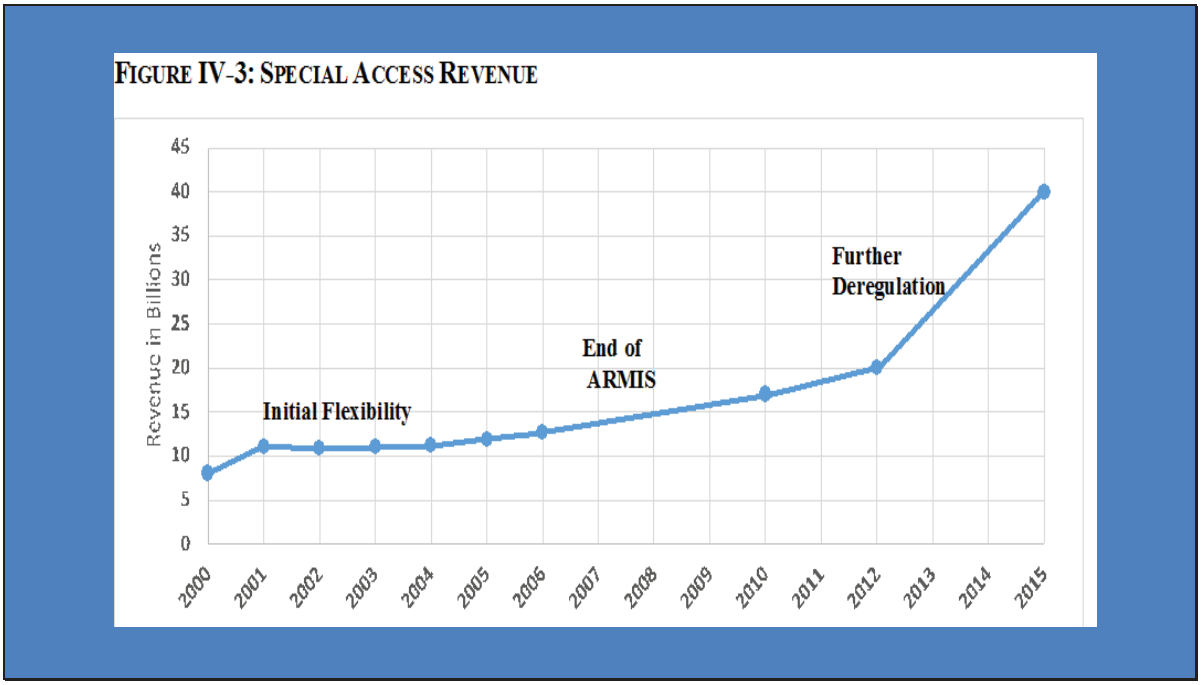

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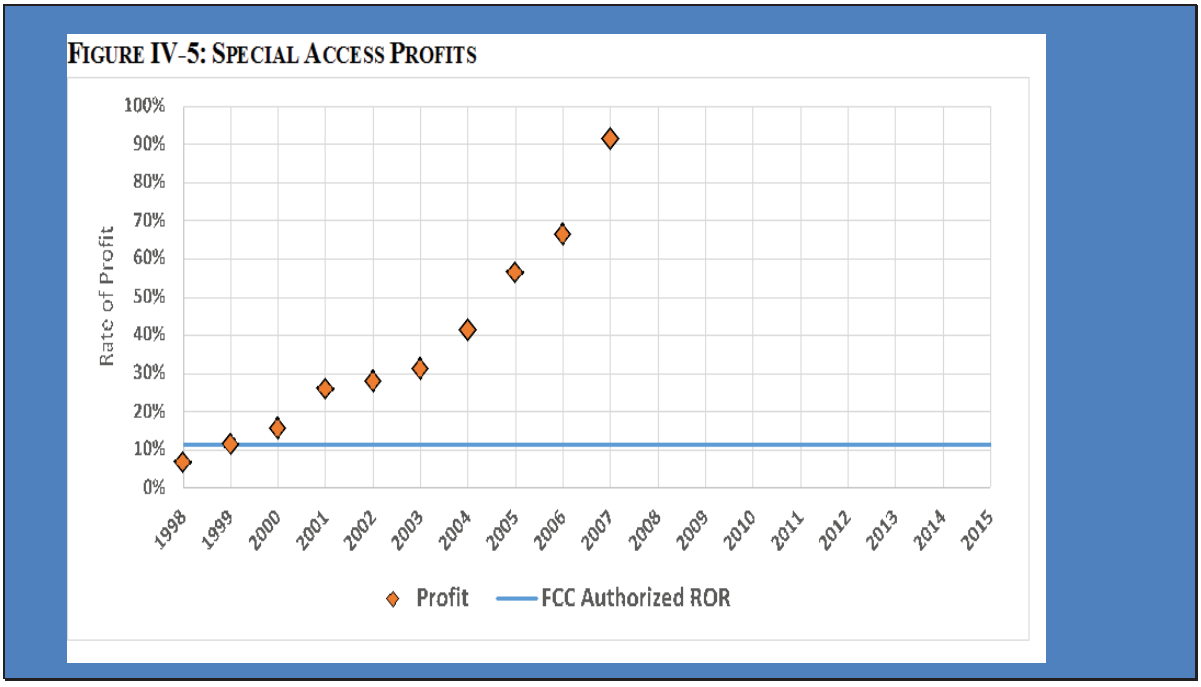

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TABLE IV-2: RECONCILING ESTIMATES OF HARM (billions of dollars)

Cost Period & Component	WIK Study	Adjustments TDM	Adjustments Price	ARMIS Elasticities -1.5	ARMIS Elasticities -1.6	ARMIS Elasticities -1.7
In 2016						
Welfare + Deadweight	2.8	7	14	18	18	18
Spillover	5.9	14.75	29.5	33.2	41.2	50
Total	8.7	21.75	43.5	51.2	59.2	68

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TABLE II-1: SUPPORT FOR KEY ELEMENTS OF THE ANALYSIS IN THE HEARING RECORD[1]

- Basic Conditions[2]
  - Franchise Monopoly History[3]
  - Few Substitutes[4]
  - Inelastic Demand and Supply[5]
  - Declining Costs & Rapid Growth[6]
- Market structure
  - Concentration/Inadequate Competition[7]
  - Barriers to Entry[8]
    - Deployment Costs[9]
    - Network Effects[10]
    - Incumbent Advantage[11]
  - Weakness of Alternatives[12]

- Perverse incentives
  - Vertical integration, Merger wave[13]
  - Regulatory shenanigans[14]
- Anticompetitive Conduct
  - Price[15]
  - Price squeeze[16]
  - Lock-in Terms and conditions[17]
- Performance
  - Price above costs[18]
  - Excess profits[19]
  - Macroeconomic Losses[20]