

POSTAL SERVICE AND INTERNET:  
EXAMPLES OF COMPLEMENTARITY AND INNOVATION

The emphasis on innovation and universal service finds an important expression in communication networks working in tandem, at least insofar as the Internet and postal communications networks are concerned. The Internet is barely 20 years old, a very early stage of evolution and diffusion for such a major innovation. Compare jet travel today with the Wright brothers at Kitty Hawk a century ago, and you have some idea of how extraordinary the innovative potential and scope of use of the Internet likely will become in another twenty years or a century. To date most observers have focused on the Internet as a substitute for the postal and telephone communications networks. Indeed, stagnant or falling volumes of postal services have been correctly attributed to electronic diversion.

However, the Internet is starting to drive many new uses for the postal communications network as well, some by economic necessity as, for example, the cost of prescription drugs from retail pharmacies soars, and as consumers react to energy price spikes and time saving convenience by changing the way they shop using organizations like Amazon.com. When two goods or services are consumed together they are called economic complements. Gasoline and the automobile are complementary goods. The postal and Internet communications networks are complementary services, not just substitutes. It is an open question whether the next twenty years and beyond of Internet evolution and diffusion will reveal the two communications networks to be mainly competitive or complementary, but the great success story of Netflix suggests that complementarity may dominate in the long run, particularly if the postal communications network retains its universal service character. Netflix, an

Internet based retail service for renting movies and other media on DVD, could not have achieved the success it has without universal postal services because broadband penetration is only 40 percent and total Internet penetration 73 percent of U. S. households according to the latest Household Diary Study for FY2006, whereas postal service penetration is universal at 100 percent. The Netflix phenomenon is the early precursor of what many other potential combinations of postal and Internet networks are likely to produce in the commercial, non-profit, and even governmental sectors.

Would Netflix have been as strong a success story if postal services were less than universal, offered less in rural or poor areas of the country? No. While Netflix has widespread appeal in all parts of the country, its low cost and convenience make it readily available to the poor and to all rural parts of the country because it uses the postal communications network. Netflix is available where first run movies, Blockbuster and other retail outlets are not. Although Netflix is now being offered on-line, that requires the high fixed cost of investing in broadband, so a majority of current and potential Netflix customers will continue to rely on postal services for delivery. Many or most of them are rural or low income consumers, so universal service will remain important for Netflix and its customers as well as the Postal Service.

However, of the total 114.2 million households in the U. S., 68.5 million could not be Netflix customers without universal postal services because not having broadband; while many of these customers can order over dial-up Internet, they cannot receive and play movies and other media over the Internet, but only by hard copy delivery of a DVD via postal services. Universal postal service enhances today's value of the developing Internet communications network because of such complementarities. Contemplating a host of future complementary uses of postal and Internet communications is what assigns in part the huge discounted present market value of the Internet. In some cases,

such complementarities could transform what are now viewed as mature industries into growth sectors.

For example, it is conceivable that the greeting card industry itself could be transformed by the complementarity between postal and Internet communications networks. The physical card would continue to be sent through the mail. However, the process of remembering when a card needs to be sent, choosing the card, signing and posting it would be a highly automated Internet service. Imagine a world where once a customer's address book of relatives and friends is entered correctly, it is updated automatically using USPS NCOA lists for the rest of her life as those individuals move from time to time. Given today's highly mobile society, such a greeting card process would not function well in the absence of universal postal services. However with universality, it could have the long run potential of greatly increasing both greeting card sales and postal first class mail volumes. The reason for this is that while rising stamp prices and the prices of greeting cards are costs that enter into a consumer's decision to buy or not buy, the time utilized is also a cost, especially for busy consumers, and possibly a less-recognized third barrier to growth today unlike a generation ago.

Even apart from the complementarity between postal and Internet communications networks, market and lifestyle changes will continue to create new uses for postal services, so long as they are universal, but not necessarily if they are not. The trend to use mail order for prescription drugs rather than retail pharmacies is driven by health care cost considerations as managed by health insurance companies. However, prescription drug coverage through mail order incentives such as 90 day supplies generally cannot discriminate between urban, suburban or rural coverage. The system only works if postal services are universal.

More recently, \$4-\$5 a gallon gasoline is an equally valid cost consideration to not drive to the local pharmacy for a prescription drug. If the

exploding cost of energy is a permanent one, how many other retail goods and services will lead consumers to substitute postal transportation and delivery services for driving to retail outlets? The success of Amazon.com may be the tip of the ice-berg if high gas prices continue. Even more fundamentally, the increasing scarcity of people's time opts for substitution of postal services for transactions at and transportation to and from retail outlets.

## II

### UNIVERSAL SERVICE BY OTHER MEANS? THE TELECOMMUNICATIONS EXPERIENCE

A final economic argument supporting the current postal USO concerns the impact on USO's when competitive entry in fact happens and uniform pricing with cross subsidies is reduced or eliminated. Where there is competitive entry, economic arguments abound to the effect that universal service can readily be maintained via other means when cross subsidies between, for example, low cost urban and high cost rural service – a subsidy implicit in uniform pricing – disappear. The lengthy empirical record from telecommunications de-regulation, however, suggests that this may not be so.<sup>1</sup> Hammond notes that “On the supply side, the method by which universal service has been funded through fees collected from the revenues of local and long distance wireline and wireless carriers, is being undermined in part by wireless competition, the growing use of e-mail, and all distance service bundling. The near term future of universal service is believed to be threatened by the growing adoption of Internet-based phone service (VoIP) as an alternative to wireline services. On the demand side, increasing requirements on the high cost fund by telecommunications carriers and continuing requirements for funding of social inclusion subsidies for indigent,

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<sup>1</sup>Allen S. Hammond IV, “Universal Service: Problems, Solutions, and Responsive Policies, March 2005, *Federal Communications Law Journal*, 57, 2, pp. 187-200.

school-age, and rural Americans combine to place increasing strain on the funding process.” (Hammond, *ibid*, page 190.)

The essence of the telecom USO problem is that USO funds as a response to competitive entry have never been obligated for cellular phone companies nor for the Internet and e-mail communications, whereas they have been obligated for local as well as long distance wireline telephone companies. The growth of cellular and e-mail has put downward pressure on the demand for wireline services, and hence downward pressure on the supply of USO funds. At the same time the demand for these funds has increased as states, for example, try to foster ever greater entry into rural telephone markets. Fully 40 percent of rural telephone revenue base is from such USO funds. The resulting crisis in the USO fund for telecom, a consequence of excessive demand and curtailed supply, likely means that even telephone service will not fully reach 100 percent coverage in the United States. It is a lesson that should be considered very carefully before tampering at all with postal universal service: namely, reforms to USOs, no matter how carefully considered and crafted, can have unintended consequences that make the universal service obligation impossible as a practical matter. Competitive entry into postal services could spawn a crisis in the postal USO just as it has in the telecom USO, where the conceptualization of the telecom USO fund completely failed to take into consideration the inclusion of cellular and e-mail in the fund.

Along with other economic arguments in support of keeping universal postal services intact, the experience with alternative means to trying to deliver universality such as the USO fund in telecommunications raising a warning flag to those determined to tamper with a system that already works well, and that can work better by nurturing complementarities with the Internet in the future as it better aligns its existing network structure now in preparation for that future.