

I. Overview

The Competitive Entry Model (“CEM”) is a quantitative tool designed to evaluate the likelihood of entry into each of XYZ Telco’s local landline service areas by a competitor. By anticipating threats, XYZ Telco can prepare a defense in advance, while at the same time avoid wasting resources defending areas that are unlikely to face competition.

Data for the model comes from several sources, none of them internal to XYZ Telco. This was because competitors are unlikely to have the same data as the company, and thus will not use it in their decision making process. As a result, the sources of data for the CEM model were 271 applications made by various RBOCs, the HAI Telecom Model, and government sources (especially the Census).

The former are applications made to the FCC pursuant to paragraph 271 of the Telecom Act of 1996. RBOCs that provide CLECs with nondiscriminatory access to network facilities and network elements are allowed to provide services that had been prohibited to them since the 1984 decision breaking up AT&T. Thus, the 271 applications generally contain a lot of detail about the amount and degree of competition facing the RBOCs in each of their service areas, though of course, one should expect that data to be heavily exaggerated. A discussion of the filings used in building the CEM model is provided in Technical Appendix A.

The HAI Telecom model is a cost model developed by HAI Consulting under contract with AT&T and MCI for estimating the forward-looking costs associated with Universal Service. Potential biases in the HAI model, and methods by which they were corrected, are discussed in Appendix B.

While it is anticipated that in the coming years, mobile phones will increasingly seen as an alternative to landlines (as has already begun to happen in urban areas), in the near future the main alternatives to XYZ Telco’s landline service are other companies providing service through twisted pairs, and cable companies. Thus, these are the focus of the CEM model.

II. Methodology

Shortly after the 1996 Telecom Act, Ameritech Michigan filed with the FCC for permission to enter the long distance and other markets. Its purported reason was that it was fulfilling requirements of Paragraph 271 of the 1996 Telecom Act by making it easier for competitors to operate in its service areas in several ways, including by selling “unbundled network elements” or “UNEs” and by allowing competitors to co-locate within its switches. Its 271 filing was quickly followed by others. These 271 filings were mined for information about the amount, degree, and location of competition faced by various RBOCs, which was then quantified.

The 271 filing data was combined with data from the other sources using a binomial choice (logit) models. Variables in the model included typical distance from the switch,

density and clustering, number of businesses and population, median income, and other variables. The complete list, as well as the model itself is described in Appendix C.

The CEM model assigns a probability (from 0 to 100 percent) that entry will occur in a given service area. The model was calibrated using data for all of the RBOC service areas, but it was tested using “out of sample” testing. That is – a version of the model was built using data from half of the filings and used to forecast competition in the remaining filing areas. In this testing, it achieved an accuracy rating of 95%, in that it accurately predicted the occurrence of competition (i.e., assigned a probability of 60% or greater) in 95% of the service areas where competition was observed. Details of the test are shown in Appendix D.

One side effect of this testing is that it revealed a potential problem with the model. Consider the following: in Michigan, the places most likely to face immediate competitive entry were in downtown Detroit, followed closely by other large cities. However, one of the key drivers of this, both directly and indirectly (through “distance” and income variables) is business density, and this level of business density is not observed in any of XYZ Telco’s service areas. As a result, the model had a tendency to understate the degree of potential competition in XYZ Telco’s service areas. (Put another way... if there were a Detroit in XYZ Telco’s service area, it would get hit first, but since there isn’t, YYY will get hit first. While that will occur later than it would if YYY were Detroit, it will occur sooner than it would if YYY were located in Ameritech Michigan’s service area since it is the juiciest target in XYZ Telco’s region.)

However, without any more information, it is impossible to determine the degree of this understatement, so ad hoc adjustments were made. These ad hoc adjustments are described in Appendix E.

III. Results

Table 1 below summarizes the CEM scores of XYZ Telco wire centers, and the total number of residential and business access lines in those service areas

Table 1. XYZ Telco Wire Center CEM Scores

Likelihood of Entry	Wire Centers	Res. Lines	Bus. Lines	% Wire Centers	% Res. Lines	% Bus Lines
80% +	Z	Z	Z	Z	Z	Z
60% +	Z	Z	Z	Z	Z	Z
40% +	Z	Z	Z	Z	Z	Z
20% +	Z	Z	Z	Z	Z	Z
0% +	Z	Z	Z	Z	Z	Z

As seen in Table 1, about Z% of XYZ Telco’s service areas have CEM scores exceeding 60%. Unfortunately, A% of XYZ Telco’s business lines, and B% of XYZ Telco’s residential lines are located within those wire centers. It is no coincidence that costs per line are significantly lower in the service areas in which competition is slated to occur, in

large part due to the density of business customers. CLECs tend to focus on attracting business customers, primarily in urban areas, precisely because costs are lower and revenues are higher for those customers.

The precise CEM scores of each exchange area are shown in Appendices F, G, H, I and J.

IV. Actionable Items

Competition in an area will, of course, be focused on the most profitable customers. That is, mostly business customers, and mostly in dense office parks or buildings. These customers will be profitable for competitors for the same reason they are profitable to XYZ Telco; revenues are high, and costs are relatively low.

Thus, recommendations for XYZ Telco are as follows:

- Identify the most profitable customers, particularly in areas with high CEM scores
- Begin working state and local regulators for permission to charge different customers in the same area different rates for the same service
- Ensure that the billing system can handle charging different customers different rates in the same area for the same service
- Assign responsibilities for competitive issues to a single individual
- Train the “boots on the ground” to identify warning signs of competition and develop a conduit for information (including lessons learned) between the regions
- Ensure that a procedure exists within marketing to allocate funds to regions about to get hit
- Sign profitable customers in areas about to get hit to long term contracts