

Underlying demand drivers

The telecommunications market is growing. Both the type and volume of telecommunication services are stretching the need for further telecommunications capacity. Text messaging remains popular, as does picture messaging. The use of broadband is accelerating, downloads are increasing and the use of hard-wired telecommunications networks to deliver TV and on-demand viewing continues to grow.

It is surprising, therefore, that companies such as Ericsson and Alcatel, which provide telecommunications hardware are experiencing falling sales and revenues.

The reasons for this are numerous. The mobile telecommunications market is maturing. As a result service providers, such as Vodafone, Orange etc, are facing stiffer competition, prices are keener and costs have to fall. Plans to extend or renew current network capacity have been put on hold. In addition, owners of existing network equipment have begun to see the benefits of renting out their assets to third-party telecommunications service providers. This sharing of capacity has reduced the need of new service providers to buy their own network hardware.

And then there is China. Huawei, a leading Chinese provider of network equipment has seen revenues rise to \$8.5 billion and is experiencing growth of 42% per annum. With a low cost base, Chinese producers are offering telecommunications equipment 40% less expensive than their European and American rivals. The Chinese are also helped by the increasing commoditization of the telecoms equipment. With slow technological change, it is easy for new companies to enter the market by adopting/copying existing technology.

European and American telecoms-equipment companies have responded to this challenge by moving their R&D and manufacturing centres to China. Furthermore, these companies have also moved into software provision, which provides their customers with the means to operate and manage their hardware. This cross bundling of software and hardware increases the technological complexity of the product and helps to gain a competitive advantage over their Chinese rivals.

The near-term prospects depend on the appetite of consumers for additional capacity. Mobile downloads of music will eat up bandwidth, requiring additional network capacity.

Similarly, growth in telephone, broadband and TV combination products will also generate increased demand for capacity. Longer term, the industry's prospects lie with the take up of 3G and whether or not network providers stick with this telecommunications protocol or move to the computer-based protocol WiMax, which will enable wireless/mobile networks to be built more cheaply.

Questions

1. Explain the difference between an income effect and a substitute effect.
2. The falling demand for network equipment due to a maturing market for telecommunication services is an income effect. Explain.
3. The rising demand for Chinese telecommunications equipment is a substitute effect. Explain.