Controlling is not enough Modeling Process II

401.661 Advanced Construction Technology

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Modeling Practice I Telecommunication Company

Problem Statements

Recently, the service quality of MSTelcom, a leading telecommunication company in Korea, has been <u>declining</u>. In spite of a series of phone rate adjustments (past efforts: hints for modeling topic), the company is now facing a danger to lose its customers.





MSTelcom wants to find policies that can turn the situation around.

→ Then HOW?

Workers

Fixing Worker Worker



Installations

Service Quality

- ➔ Complaints
- → Time to Resolve Complaints
- ➔ Attractiveness



Modeling Service Quality





Variables

- ♦ Service
- Demand for new phone lines
- Customer needs
- ♦ Rates
- Speed of resolving complaints
- Workforce
- Complaints

- Phone lines
- Number of
- services
- Customer satisfaction
- Workforce morale
- Profits
- Costs
- Points
- Competition Copyright ©1997,1998 Jim Hine

Reference Modes



Momentum Policies

Lay off workers (fixing and installations).

Try to have the company grow faster than the penalties.

If service stays low, reduce telephone rates even more.

The Rate-Setters' Error





Given the problem, rate setting relying on the traditional way can cause continuing deterioration.

Focus on Quality and Productivity...





Respond to rate threat by improving quality.

Resist pressure on productivity.

Compounding via Morale



Incentives on good service and productivity

No layoffs



Even Hire More …



The company Hopes…



quality and in turn telephone lines, which increases their profits.However...

Lurking Danger



Increased telephone lines can deteriorate their service quality and profitability as well.



Policies

<u>Start</u> hiring (profits will suffer in the short term). Introduce incentives on good service and productivity increases.

Do not put newly hired people in line expansion, which is counter to the 'company's hope'. However, our conclusion suggests that the company's hope is dangerous.

Utilize them for resolving customers' complaints: Increasing service with slow growth.

Modeling Practice II Prefabrication

Problem Statements

Although the prefabrication method has potential advantages over the standard method, private companies have undervalued its advantages and are reluctant to adopt them.

Building and Construction Authority wants:

- to find the drivers that have inhibited prefabricated construction in the private sector and,
- to know how to increase their use of the prefabrication method, by improving the perceived attractiveness of the method.

Why the Singapore construction industry has been dependent on cheap foreign labor instead of using high tech such as the prefabrication method? (think why the government forces the private sector to use PF…probably they think the industry competitiveness)



Dependency on cheap foreign labor has also resulted in less use of PF in the private sector





Policy Implication 1.Limiting Availability of Foreign Workers: will work but takes time due to significant time delays

Policy Implication 2: Regulating the buildabuility Score: will work but...





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