Chapter Four

Valuing Benefits and Costs in Primary Markets
**Figure 4-1  How to Consider Market and Government Failure in CBA**

**Current situation:** A market is currently functioning without government intervention and there is evidence of market failure.

**Conclusion:** It is worth considering potential government interventions that might increase net social benefits.

**CBA analytic task:** Given the presence of market failure, assess whether the benefits of a proposed government policy (including any benefits from reducing or eliminating the market failure) exceed the costs of the policy.

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**Current situation:** The government has intervened and there is currently no functioning market, but there is evidence of government failure.

**Conclusion:** The current government intervention is not optimal—the current policy is either redundant or replaceable by a potentially more efficient government policy.

**CBA analytic task:** Given the presence of government failure, assess whether either:

- The benefits of eliminating the current government policy exceed the costs of eliminating the policy (i.e., whether, on balance, it is preferable to return to an operational market).

- OR

- The benefits of replacing the existing government policy with some other government intervention exceed the cost of replacement (i.e., whether some other government policy would increase net social benefits).
Figure 4-2  Measuring Benefits in an Efficient Market with No Price Effects

Social surplus change (ignoring costs of project inputs to the government):
Project (a): Direct increase in supply of \( q' \)—gain of project revenue equal to area of rectangle \( q_0abq_1 \)
Project (b): Supply schedule shift through cost reduction for producers—gain of trapezoid \( abde \)
Figure 4-3  Measuring Benefits in an Efficient Market

Social surplus change (ignoring costs of project inputs to the government):
Project (a): Direct increase in supply of $q'$—gain of triangle $abc$ plus project revenue equal to area of rectangle $q_2cbq_1$
Project (b): Supply schedule shift through cost reductions for producers—gain of trapezoid $abde$
Figure 4-4  Monopoly

Price

Consumer surplus

Producer surplus

Deadweight loss

$P_m$

$P_c$

$f$

$Q_m$

$Q_c$

$D$

MC

AC

AR

MR

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Figure 4-5  Natural Monopoly

Price

$P_m$

$P_r$

$P_c$

$P_0$

$Q_m$

$Q_r$

$Q_c$

$Q_0$

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Figure 4-6  Information Asymmetry

Price

Transfer to seller

Deadweight loss

Quantity
Figure 4-7  Negative Externality
**Figure 4-8** Social Benefits for Direct Supply of a Good with a Positive Externality

Gain to consumers in target neighborhood: \( B + E \)
Gain to persons in nearby neighborhood: \( C + G + F \)
Gain to producers: \( A + C \)
Program costs: \( A + B + C + G + E \)
Net benefits: \( C + F \)
Figure 4-9  (a) Rivalrous Good (e.g., hamburger) (b) Nonrivalrous Good (e.g., streetlight)
Figure 4-10  Consumer Surplus in the Presence of Gambling Addiction

Price

Quantity

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Figure 4-11  Opportunity Costs with No Price Effects
Figure 4-12  Opportunity Costs with Inelastic Supply Curve

Price

P

0

Acres of land

a

S

b

D

0
Figure 4-13  Opportunity Costs with Price Effects
Figure 4-14  Opportunity Costs with a Price Floor

Diagram showing the relationship between price and number of workers, highlighting the concept of opportunity costs under a price floor.
Figure 4-15  Opportunity Costs When Buying from a Monopoly