

TAX INCIDENCE WITH FOREIGN TRADE

	Benz. US	Benz. Other	Styr. US	Styr. Other
1983 Quantity Consumed	3991.00	11025.00	2440.00	5337.00
1983 Price	460.25	459.62	647.50	715.87
Supply Intercept	412.07	426.70	163.25	231.96
Supply Slope	0.0119	0.0030	0.0004	0.0002
Demand Intercept			2960.00	3272.53
Demand Slope			-0.95	-0.48
Tax Rate	11.03	0.00	0.00	0.00
After-tax Quantity	3863.73	11186.49	2430.16	5335.34
% Change	-3.19%	1.46%	-0.40%	-0.03%
After-tax Price	469.17	460.36	656.83	716.66
% Change	1.94%	0.16%	1.44%	0.11%
US Share Of Sales	90.61%	0.18%	97.69%	4.40%
Production	3520.63	11529.58	2608.98	5156.52

AUXILIARY VARIABLES

	VALUE	RANGE NAME
US Benzene Alpha (Linear)	-2.908	USALPH1
US Benzene Beta (Linear)	3.017	USBET1
Other Benzene Alpha (Logistic)	385	OTHALPH1
Other Benzene Beta (Logistic)	20.34	OTHBET1
US Styrene Alpha (Linear)	-1.359	USALPH2
US Styrene Beta (Linear)	1.508	USBET2
Other Styrene Alpha (Logistic)	52.70	OTHALPH2
Other Styrene Beta (Logistic)	10.17	OTHBET2
1983 US Share of US Benzene	88.77%	USEQSHB
1983 US Share of Other Benzene	0.25%	OTHEQSHB
1983 US Benzene Production	3570.71	USEQB
1983 Other Benzene Production	11445.29	OTHEQB
1983 US Share of US Styrene	99.51%	USEQSHS
1983 US Share of Other Styrene	5.00%	OTHEQSHS
1983 US Styrene Production	2694.93	USEQS
1983 Other Styrene Production	5082.07	OTHEQS
1983 US Benzene used in Styrene	2829.67	USDD
1983 Other Benzene used in Stryene	5336.18	OTHDD
US Benzene Capacity	100000.00	USPRMAX
Other Beneze Capacity	100000.00	OTHPRMAX
US Styrene Capacity	100000.00	USPPMAX
Other Styrene Capcity	100000.00	OTHPPMAX
Minimum Benzene Price	0.00	MINPRPR
Minimum Styrene Price	0.00	MINPPPR

Contents of numerical cells

Cell	Formula
B4:	3991
B5:	460.25
B7:	+B5-B8*(B4+C35-B20)

B8: 0.011922  
  
 B12:  $(14.88 - 4.87) * (2204.6 / 2000)$   
 B14:  $@AVG (@MIN (C44, (1.05 * D14 * D19 + 1.05 * E14 * E19) * B4 / C41), B1$   
 B15:  $(B14 - B4) / B4$   
 B16:  $@IF (B14 = C46, 0, @MAX (B7 + B8 * B14 + B12, C48))$   
 B17:  $(B16 - B5) / B5$   
  
 B19:  $1 - (C24 + @ABS (B16 / (C16 + B12)) * C25)$   
 B20:  $+ B14 * B19 + C14 * C19$   
  
 C4: 11025  
 C5:  $(@AVG (537, 461, 408, 449) * 1803 + @AVG (446, 464, 477, 446) * 54$   
 C7:  $+ C5 - C8 * (C4 + C36 - C20)$   
 C8: 0.003009  
  
 C12: 0  
  
 C14:  $@AVG (@MIN (C45, (1.05 * (1 - D19) * D14 + 1.05 * (1 - E19) * E14) * C4$   
 C15:  $(C14 - C4) / C4$   
 C16:  $@IF (C14 = C45, 0, @MAX (C7 + C8 * C14 + C12, C48))$   
 C17:  $(C16 - C5) / C5$   
  
 C19:  $1 / (1 + C26 * @ABS (B16 / C16) ^ C27)$   
 C20:  $+ B14 * (1 - B19) + C14 * (1 - C19)$   
  
 D4: 2440  
 D5: 647.5  
  
 D7:  $+ D5 - D8 * (D4 + C39 - D20) - 1.05 * B5$   
 D8: 0.00039174  
 D9:  $+ D5 - D10 * D4$   
 D10:  $- 0.9477459016$   
  
 D12: 0  
  
 D14:  $@AVG (@MIN (C46, (D9 - D7 - D12 - 1.05 * B16) / (D8 - D10)), D14)$   
 D15:  $(D14 - D4) / D4$   
 D16:  $+ D9 + D10 * D14$   
 D17:  $(D16 - D5) / D5$   
  
 D19:  $1 - (C28 + @ABS (D16 / E16) * C29)$   
 D20:  $+ D14 * D19 + E14 * E19$   
  
 E4: 5337  
 E5:  $(@AVG (1007, 761, 635, 683) * 1139 + @AVG (655, 699, 718, 696) * 2$   
 E7:  $+ E5 - E8 * (E4 + C40 - E20) - 1.05 * C5$   
 E8: 0.00024803  
 E9:  $+ E5 - E10 * E4$   
 E10:  $- 0.4790457208$

E12:	0
E14:	@AVG (@MIN (C47, (E9-E7-E12-1.05*C16) / (E8-E10)), E14)
E15:	(E14-E4) / E4
E16:	+E9+E10*E14
E17:	(E16-E5) / E5
E19:	1 / (1+C30*@ABS (D16/E16) ^C31)
E20:	+D14*(1-D19)+E14*(1-E19)
C24:	-2.9084
C25:	2.95623/0.98
C26:	385
C27:	19.93/0.98
C28:	-1.3593
C29:	2.95623/1.96
C30:	52.7
C31:	19.93/1.96
C33:	1-(C24+(B5/C5)*C25)
C34:	1/(1+C26*(B5/C5)^C27)
C35:	+C33*B4+C34*C4
C36:	(1-C33)*B4+(1-C34)*C4
C37:	1-(C28+(D5/E5)*C29)
C38:	1/(1+C30*(D5/E5)^C31)
C39:	+C37*D4+C38*E4
C40:	(1-C37)*D4+(1-C38)*E4
C41:	1.05*C39
C42:	1.05*C40
C44:	100000
C45:	100000
C46:	100000
C47:	100000
C48:	0
C49:	0

