

Production Response to Increased Imports

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Figure 1. Import Quotas and Production Controls

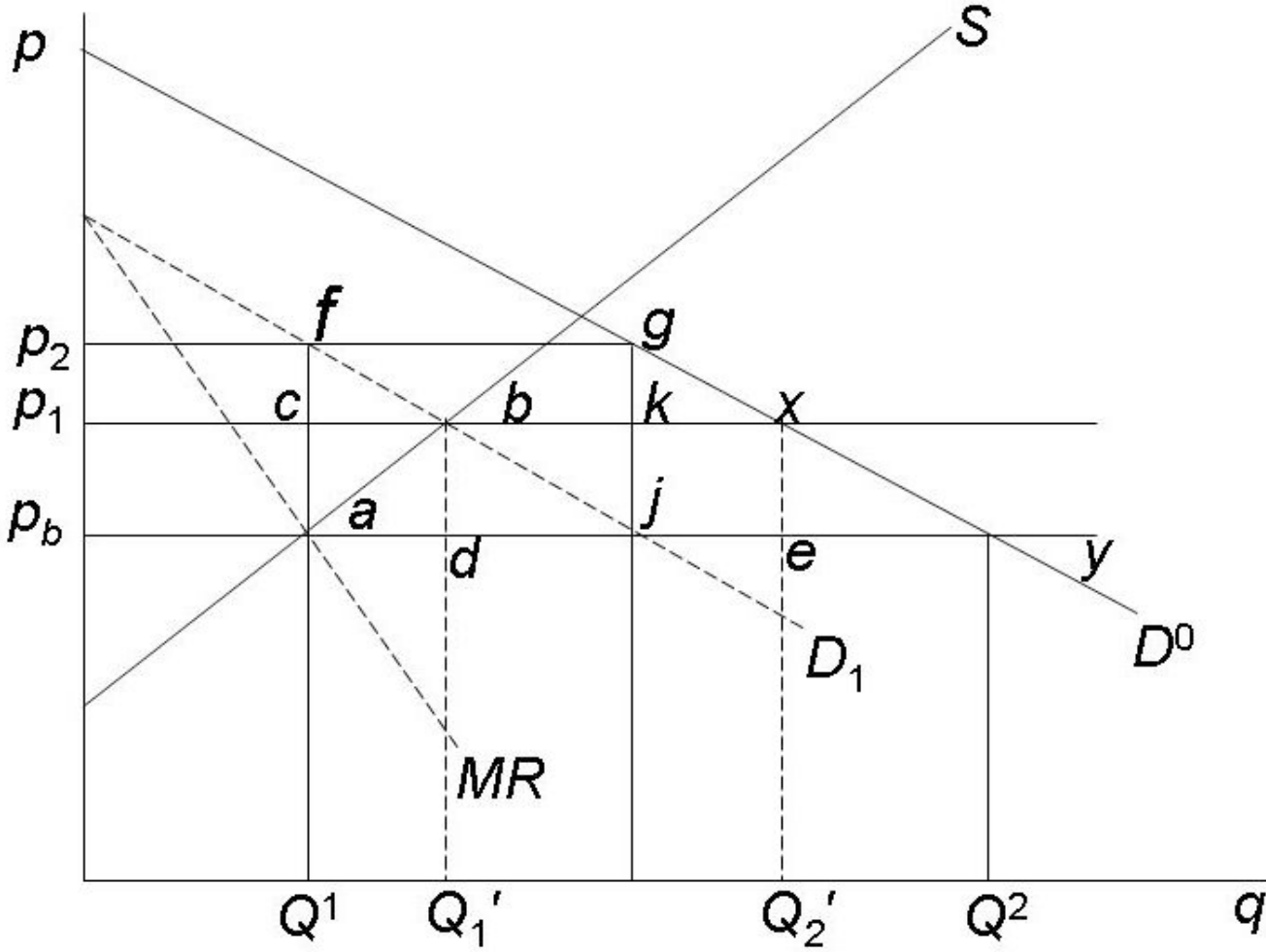


Figure 2. Producer Impact of Production and Import Controls

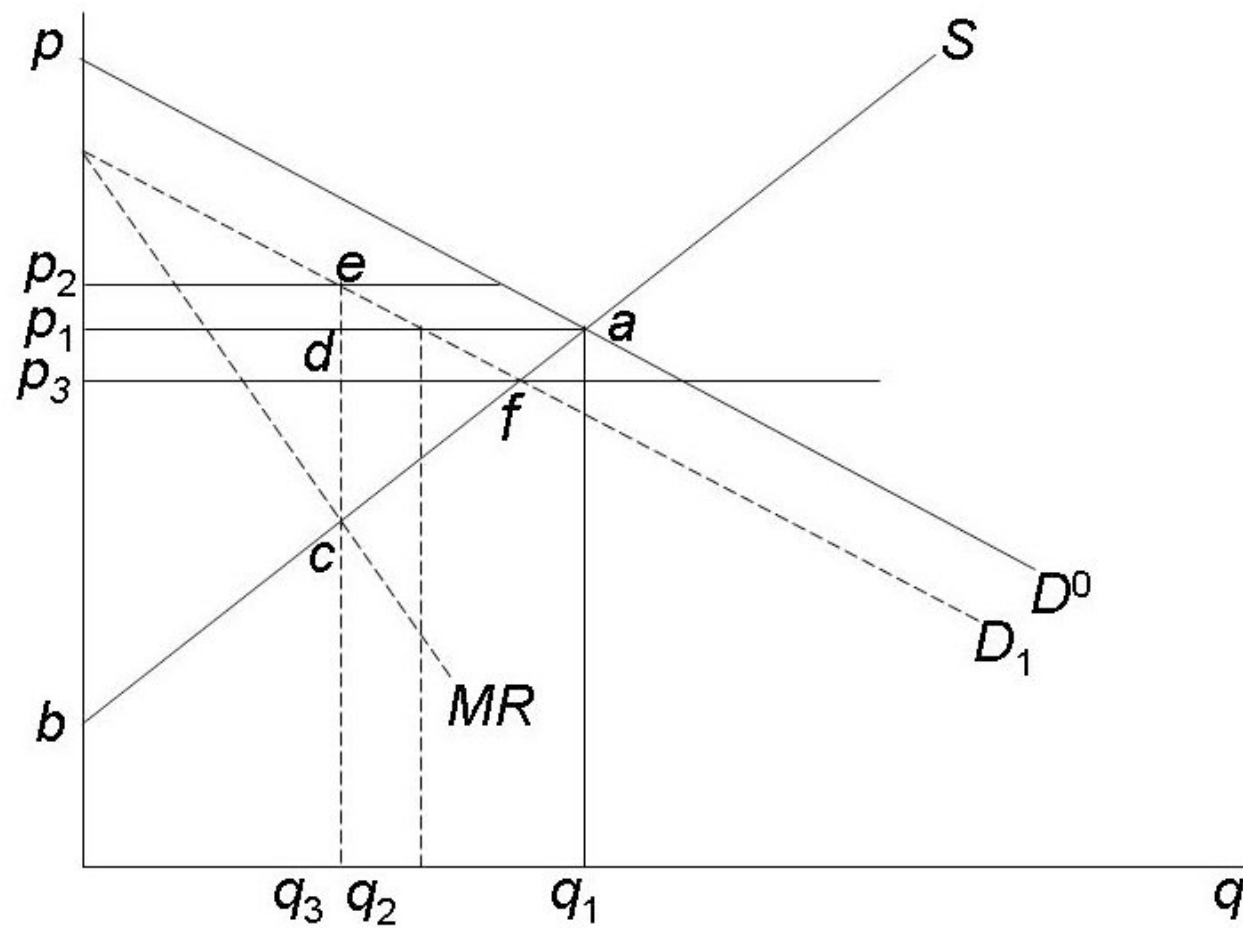


Table 1. Alternative Import Quota Levels under Market Clearing Conditions

Demand/Supply Elasticities		Total Import Quota (1000 MT)				
		1482	1582	1982	2482	3482
-0.3/0.5	Market Clearing Price (cents/lb)	22.92	22.57	21.16	19.41	15.89
	Market Clearing Quantity (1,000 MT)	7,597	7,539	7,306	7,015	6,432
	Producer Surplus (1000 \$)	2,879,586	2,820,944	2,590,890	2,313,476	1,792,495
	Consumer Surplus (1000 \$)	7,647,393	7,717,906	8,003,193	8,367,083	9,119,132
-0.3/1.5	Market Clearing Price (cents/lb)	22.92	22.76	22.11	21.30	19.67
	Market Clearing Quantity (1,000 MT)	7,597	7,516	7,193	6,790	5,983
	Producer Surplus (1000 \$)	1,279,816	1,252,767	1,147,462	1,022,330	793,733
	Consumer Surplus (1000 \$)	7,647,393	7,679,925	7,810,745	7,975,824	8,311,160
-0.5/0.5	Market Clearing Price (cents/lb)	22.92	22.65	21.55	20.17	17.42
	Market Clearing Quantity (1,000 MT)	7,597	7,551	7,369	7,141	6,686
	Producer Surplus (1000 \$)	2,879,586	2,833,676	2,652,800	2,432,917	2,013,860
	Consumer Surplus (1000 \$)	4,588,436	4,643,631	4,867,713	5,155,240	5,755,044
-0.5/1.5	Market Clearing Price (cents/lb)	22.92	22.78	22.20	21.48	20.04
	Market Clearing Quantity (1,000 MT)	7,597	7,525	7,239	6,882	6,167
	Producer Surplus (1000 \$)	1,279,816	1,255,835	1,162,179	1,050,212	843,289
	Consumer Surplus (1000 \$)	4,588,436	4,617,276	4,733,539	4,880,900	5,182,400

Table 1. Alternative Import Quota Levels under Market Clearing Conditions, Continued

Demand/Supply Elasticities		Total Import Quota (1000 MT)				
		1482	1582	1982	2482	3482
-1.0/0.5	Market Clearing Price (cents/lb)	22.92	22.74	22.03	21.14	19.36
	Market Clearing Quantity (1,000 MT)	7,597	7,568	7,450	7,302	7,007
	Producer Surplus (1000 \$)	2,879,586	2,849,829	2,731,957	2,587,222	2,306,435
	Consumer Surplus (1000 \$)	2,294,218	2,329,988	2,475,834	2,664,367	3,062,185
-1.0/1.5	Market Clearing Price (cents/lb)	22.92	22.81	22.36	21.80	20.68
	Market Clearing Quantity (1,000 MT)	7,597	7,541	7,319	7,040	6,484
	Producer Surplus (1000 \$)	1,279,816	1,261,132	1,187,772	1,099,162	932,246
	Consumer Surplus (1000 \$)	2,294,218	2,316,683	2,407,639	2,523,796	2,764,319
-1.5/0.5	Market Clearing Price (cents/lb)	22.92	22.79	22.26	21.60	20.29
	Market Clearing Quantity (1,000 MT)	7,597	7,575	7,488	7,379	7,161
	Producer Surplus (1000 \$)	2,879,586	2,857,573	2,770,156	2,662,308	2,451,358
	Consumer Surplus (1000 \$)	1,529,479	1,555,937	1,664,038	1,804,269	2,101,748
-1.5/1.5	Market Clearing Price (cents/lb)	22.92	22.83	22.46	22.00	21.09
	Market Clearing Quantity (1,000 MT)	7,597	7,551	7,369	7,141	6,686
	Producer Surplus (1000 \$)	1,279,816	1,264,513	1,204,221	1,130,926	991,241
	Consumer Surplus (1000 \$)	1,529,479	1,547,877	1,622,571	1,718,413	1,918,348

Table 2. Alternative Import Quota Levels and Supply Management Strategies

Demand/Supply Elasticities		Total Import Quota (1000 MT)				
		1482	1582	1982	2482	3482
-0.3/0.5	Optimal Production Quota (1,000 MT)	4,801	4,764	4,617	4,433	4,065
	Domestic Price (cents/lb)	46.45	45.92	43.79	41.13	35.81
	Change from SQ Mkt Clearing PS (1000 \$)	1,970,719	1,881,977	1,533,840	1,114,035	325,644
	Change from SQ Mkt Clearing CS (1000 \$)	-3,985,004	-3,910,960	-3,607,370	-3,211,210	-2,363,312
-0.3/1.5	Optimal Production Quota (1,000 MT)	4,204	4,159	3,981	3,757	3,311
	New Domestic Price (cents/lb)	51.47	51.01	49.14	46.82	42.16
	Change from SQ Mkt Clearing PS (1000 \$)	2,391,468	2,313,876	2,011,796	1,652,842	997,089
	Change from SQ Mkt Clearing CS (1000 \$)	-4,647,887	-4,589,219	-4,348,865	-4,035,638	-3,366,568
-0.5/0.5	Optimal Production Quota (1,000 MT)	5,219	5,188	5,063	4,906	4,593
	New Domestic Price (cents/lb)	34.93	34.58	33.19	31.46	27.99
	Change from SQ Mkt Clearing PS (1000 \$)	1,005,522	947,589	719,342	441,873	-86,931
	Change from SQ Mkt Clearing CS (1000 \$)	-2,088,643	-2,037,124	-1,825,794	-1,549,808	-958,427
-0.5/1.5	Optimal Production Quota (1,000 MT)	4,429	4,388	4,221	4,012	3,596
	New Domestic Price (cents/lb)	38.91	38.62	37.44	35.97	33.03
	Change from SQ Mkt Clearing PS (1000 \$)	1,339,549	1,290,468	1,098,785	869,625	446,120
	Change from SQ Mkt Clearing CS (1000 \$)	-2,643,202	-2,604,640	-2,446,611	-2,240,558	-1,800,068
-1.0/0.5	Optimal Production Quota (1,000 MT)	5,867	5,844	5,753	5,639	5,411
	New Domestic Price (cents/lb)	27.29	27.09	26.31	25.34	23.39
	Change from SQ Mkt Clearing PS (1000 \$)	365,901	333,307	204,203	45,675	-261,871
	Change from SQ Mkt Clearing CS (1000 \$)	-791,213	-759,459	-629,121	-458,731	-93,054

Table 2. Alternative Import Quota Levels and Supply Management Strategies (continued)

Demand/Supply Elasticities		Total Import Quota (1000 MT)				
		1482	1582	1982	2482	3482
-1.0/1.5	Optimal Production Quota (1,000 MT)	4,881	4,845	4,702	4,523	4,165
	New Domestic Price (cents/lb)	29.78	29.62	28.97	28.16	26.53
	Change from SQ Mkt Clearing PS (1000 \$)	574,373	547,305	441,020	312,643	70,816
	Change from SQ Mkt Clearing CS (1000 \$)	-1,167,467	-1,144,598	-1,050,825	-928,441	-666,440
-1.5/0.5	Optimal Production Quota (1,000 MT)	6,237	6,219	6,147	6,058	5,879
	New Domestic Price (cents/lb)	25.21	25.07	24.52	23.83	22.45
	Change from SQ Mkt Clearing PS (1000 \$)	191,739	168,627	76,844	-36,390	-257,875
	Change from SQ Mkt Clearing CS (1000 \$)	-423,956	-400,315	-303,249	-176,288	96,391
-1.5/1.5	Optimal Production Quota (1,000 MT)	5,219	5,188	5,063	4,906	4,593
	New Domestic Price (cents/lb)	26.92	26.81	26.34	25.77	24.61
	Change from SQ Mkt Clearing PS (1000 \$)	335,174	315,863	239,781	147,291	-28,977
	Change from SQ Mkt Clearing CS (1000 \$)	-696,214	-679,041	-608,598	-516,603	-319,476

Table 3. Import Quota Levels resulting in Status Quo Market Clearing Producer Surplus

Demand/ Supply Elasticities	Quota Level (1000 MT)	Producer Price (cents/lb)	Domestic Production (1000 MT)	Change from Status Quo Consumer Surplus (1000 \$)
-0.3/0.5	3,923	33.47	3,903	-1,966,271
-0.3/1.5	5,337	33.52	2,482	-1,974,783
-0.5/0.5	3,313	28.57	4,646	-1,062,072
-0.5/1.5	4,680	29.50	3,096	-1,222,709
-1.0/0.5	2,628	25.05	5,606	-407,431
-1.0/1.5	3,792	26.03	4,055	-580,691
-1.5/0.5	2,321	24.05	6,087	-217,976
-1.5/1.5	3,313	24.80	4,646	-354,024

Figure 3. Change in Producer Surplus from SQ Market Clearing Conditions Given Alternative Demand/Supply Elasticities

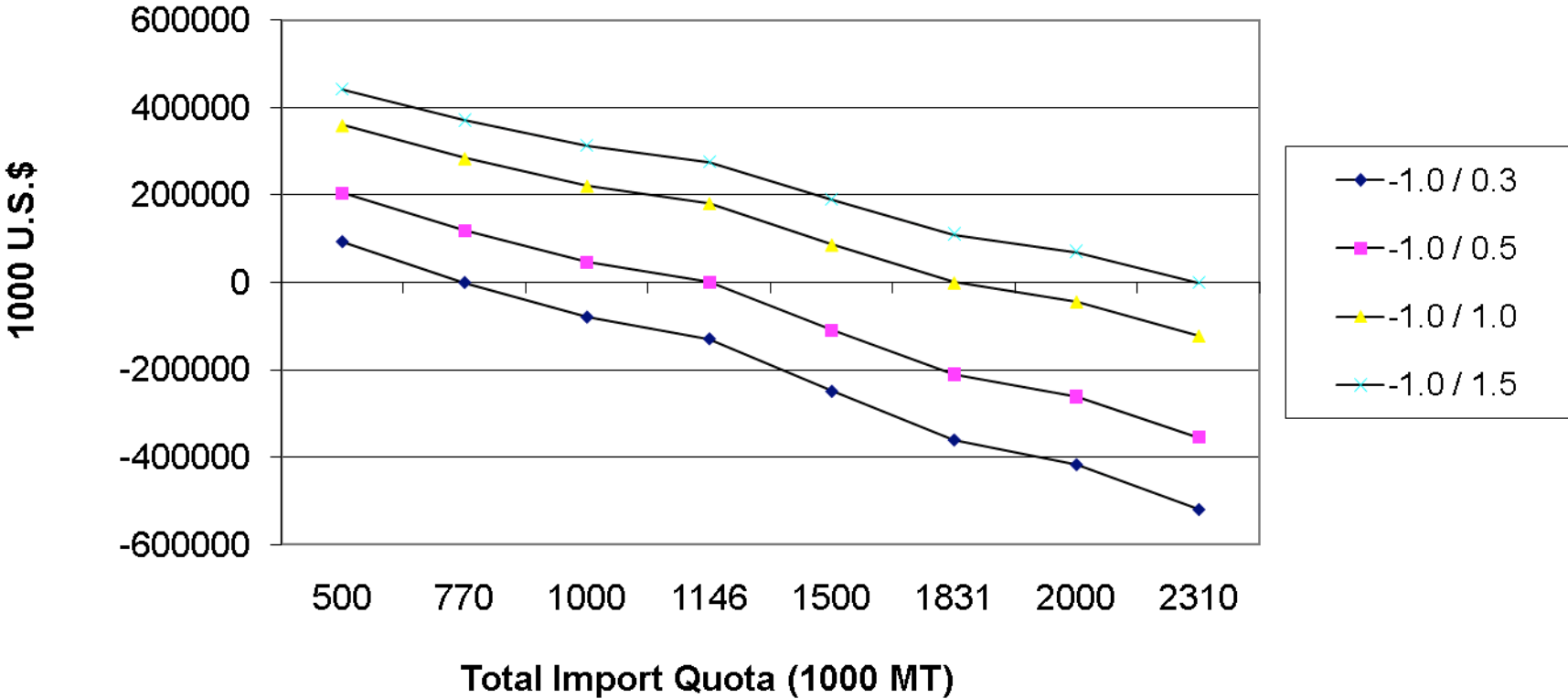


Figure 4. Change in Producer Surplus from SQ Market Clearing Conditions Given Alternative Demand/Supply Elasticities

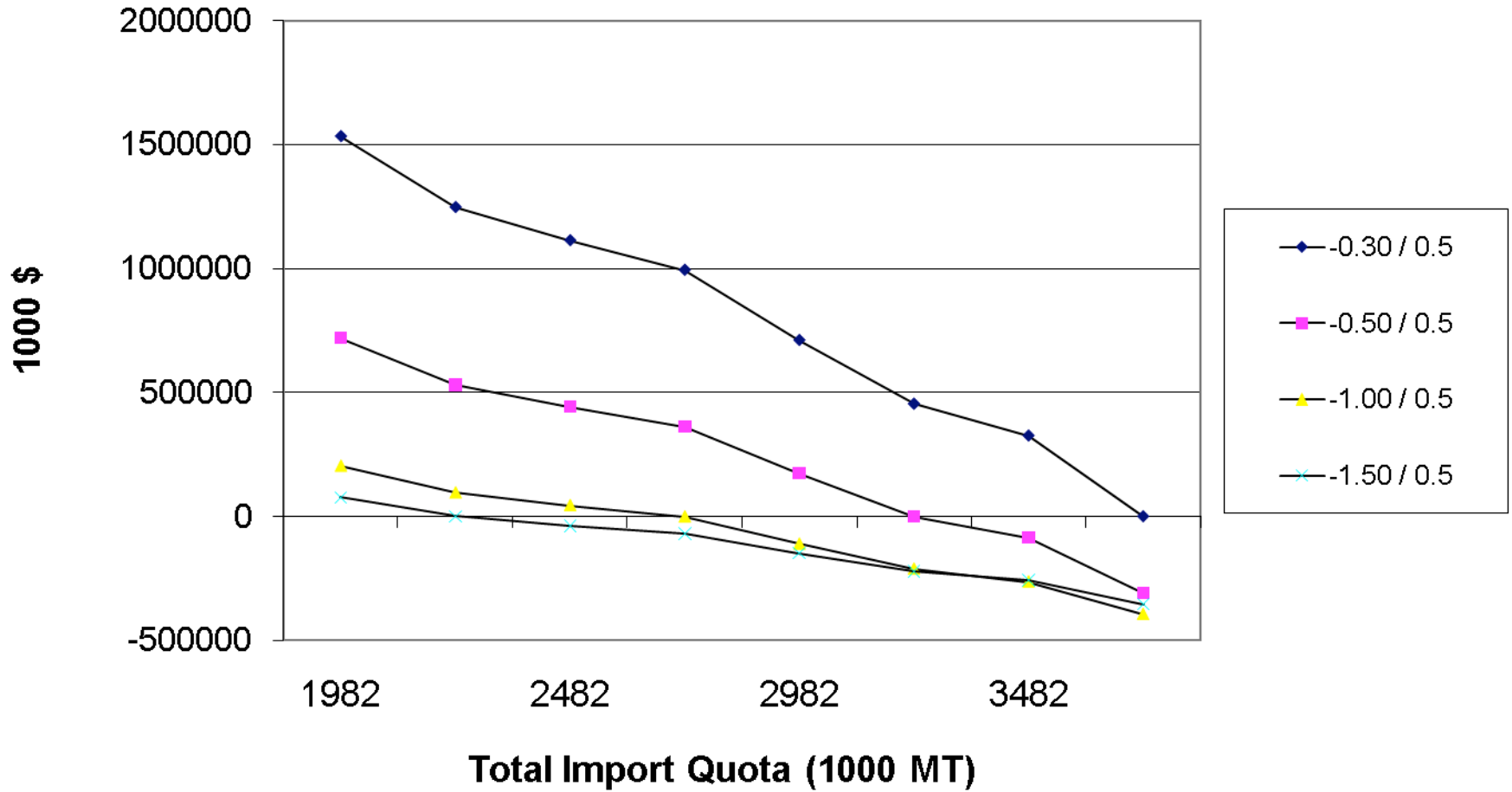


Figure 5. Rents Accruing to Sugar Exporters Resulting from Supply Management Schemes

