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# Do Socioeconomic Regulations Discriminate against Small Firms?\*

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## I. Introduction

Federal procurement laws subject all government contractors and subcontractors to a complex maze of what have become known as socioeconomic regulations. Purportedly, these regulations are a means by which the government can use its power as a large buyer—sometimes the only buyer—to force the business sector to help implement a variety of social policies, such as increasing employment opportunities for the handicapped and the minorities, raising wage rates in some specific industries, stimulating small business creation, reducing regional inequalities, decreasing national dependence on imports, and numerous others. In all, there are currently no fewer than 4,000 provisions of Federal Law and more than 64,000 pages of regulations affecting procurement.

Consider, for instance, the Rehabilitation Act of 1973 which, in most respects, is a prototype of 37 major socioeconomic regulations. Aimed at expanding employment opportunities for the handicapped, this act requires businesses selling products and services to the Federal government to make “reasonable accommodations,” such as job restructuring, physical access, and job counseling for the handicapped. Failure to do so could result in the loss of Federal contracts and possibly court litigation.

According to its critics, the Rehabilitation Act unfairly imposes additional costs of hiring and training the handicapped workers onto firms participating in the Federal contract market. (In fact, the Act does not require an estimate of costs nor an assessment of the ability of firms to pay.) Moreover, the critics contend that the socioeconomic regulations place small firms at a disadvantage relative to large firms, a consequence that appears to run counter to other economic objectives.

Several reasons have been cited to support this latter contention. First, large firms supply unique products to the Federal government. The Stealth bomber, MX missile, Trident submarine, and space shuttle are examples of unique products procured from the large business sector. With their strong market power, these businesses are in a better position to pass the additional costs of hiring the handicapped onto their suppliers, the general taxpayer, or both. Second, large firms

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are more likely to be in a position to make better use of the specialized skills of the handicapped. Finally, economies of scale in the provision of physical accommodations and supportive services to aid the handicapped may be present. Thus, the net per person cost of hiring the handicapped is likely to be lower for large firms than it is for smaller firms.

In contrast to these popular arguments, a survey conducted by the Congressional Joint Economic Committee (JEC)<sup>1</sup> provided some limited evidence that small firms may actually benefit from socioeconomic regulations. Based upon a 1979–80 questionnaire survey of 2,530 Federal contractors, to which 766 companies responded, the JEC study shows that a majority (65%) of small firms reported that their profit margins remained adequate or were actually better than they expected prior to entering the procurement market.

The principal objective of this paper is to subject the issue of a possible small business bias resulting from the imposition of socioeconomic regulations to rigorous theoretical analysis. In view of the fact that most of the criticisms of these regulations are based on the observation—which we believe to be accurate—that the affected industries are typically oligopolistic with high entry barriers and firms of *unequal* sizes, we will focus our attention on this case. It turns out that the simpler situation, when firms are atomistic price-takers, is a special case of our model.

We employ the conjectural variations approach to model oligopolistic interactions. This approach has become very popular in the industrial organization literature in recent years<sup>2</sup> because it allows great flexibility—perfect competition, monopoly, and monopolistic competition can all be considered special cases of conjectural variations. Two alternative parameters are chosen as proxies for firm size: market share and the degree of economies of scale.

Several surprising results emerge. First, when factor substitution is possible, some socioeconomic regulations can actually have consequences diametrically opposed to what is intended. Second, it is not necessarily true that these regulations hurt the industry (unless the industry is a monopoly or is competitive). And third, even when these regulations lower industry profits, small firms could come out ahead, absolutely as well as relatively, provided that the industry is not *too* collusive.

It must be mentioned, however, that our model does not take into account administration and monitoring costs. This omission is relatively harmless as our main intention is not to compare alternative policies which may have different administration and monitoring costs, but rather to pursue the less ambitious task of examining the impact of a typical socioeconomic regulation on firms of unequal sizes.

The paper is organized as follows. Section II sets up the basic model using stylized clauses of the Rehabilitation Act as examples of socioeconomic regulations. Section III shows how employment and output are affected by the regulations. Section IV examines how profits of small and large firms are affected in an oligopolistic framework. Results of a numerical simulation for various market structures are reported in section V. A summary and implications are presented in section VI.

## II. The Basic Model

Consider an industry consisting of two firms (which could be of unequal sizes) producing a homogeneous commodity. The analysis can be easily extended to the case of  $n > 2$  firms. Call

1. See Premus, et al. [7]. This study was partially funded by a grant from the Small Business Administration.

2. The main references are Dixit [1], Katz and Rosen [3], Perry [6], Seade [9], and Stern [10].

$q_i$  the output of firm  $i$  ( $i = 1, 2$ ),  $Q$  ( $=q_1 + q_2$ ) the output of the industry, and  $P(Q)$  the inverse market demand function, with  $P' < 0$ .

Let  $q_i = F(K_i, L_i)$  be the production function (continuous and twice differentiable, and everywhere strictly concave—the latter condition on  $F$  ensures satisfaction of second-order conditions for profit maximization), which is the same for both firms, where  $K_i$  is capital and  $L_i$  is labor.  $L_i$  is measured in efficiency units which, for convenience, are chosen to be equal to one man-hour of non-handicapped labor. Suppose that one man-hour of handicapped labor is equivalent to  $\alpha$  man-hour of non-handicapped labor for the particular kind of production in question. Thus,

$$L_i = N_i + \alpha N_i^*,$$

where  $N_i$  and  $N_i^*$  denote the number of non-handicapped and handicapped workers respectively. We assume that  $\alpha < 1$ ; otherwise there is no reason for the firm to treat handicapped and non-handicapped workers differently, even in the absence of regulation. It must be recognized that  $\alpha$  may be equal or greater than unity in some lines of work. In other words, we focus only on situations where handicapped workers are less efficient than non-handicapped workers, without suggesting that this is always the case.

The firm is assumed to maximize its total profit by choosing  $K_i$ ,  $N_i$ , and  $N_i^*$ , subject to the regulation according to which (1) no less than a certain fraction ( $k$ ) of a firm's employment must be handicapped; and (2) handicapped and non-handicapped workers must be paid the same wage,  $w$  per worker per hour.

Formally, the problem facing the firm  $i$  is:

$$\max PF(K_i, L_i) - w(N_i + N_i^*) - rK_i \tag{1}$$

subject to

$$N_i^* \geq k(N_i + N_i^*). \tag{2}$$

Assuming that firms choose to satisfy, but not to overfulfill, the handicapped requirement, (2) holds with equality. The Lagrangian associated with (1) and (2) is

$$\mathcal{L} = PF(K_i, L_i) - w(N_i + N_i^*) - rK_i - \lambda[N_i^* - k(N_i + N_i^*)]. \tag{3}$$

Before proceeding with the maximization, note that  $\partial(PF(x_1, x_2))/\partial x_i$  can be written as:

$$\partial(PF(x_1, x_2))/\partial x_i = PF_i + q_i[\partial P/\partial x_i], \tag{4}$$

where  $F_i$  denotes  $\partial F(x_1, x_2)/\partial x_i$ , the marginal products of  $F$ . The second term on the right hand side of (4) can be rewritten as  $q_i v_i [\partial P/\partial Q] F_i = q_i v_i P' F_i$ , where  $v_i \equiv dQ/dq_i$  is the conjectural (output) variation of firm  $i$ . This parameter reflects firm  $i$ 's belief as to how the industry output would change if it changes its output. If firm  $i$  is a price taker (as in perfect competition),  $v_i = 0$ ; if it adopts Cournot conjecture,  $v_i = 1$ , and if it is perfectly collusive  $v_i = 2$ .<sup>3</sup> Thus,  $v_i$  can be

3. In fact, since conjectural variations may differ across firms (they can be made a function of output as well as number of firms), the conjectural variations approach can also be used to model an asymmetric oligopoly such as the

interpreted as an index of collusion with a higher  $v_i$  representing greater collusion and  $v_i \in [0, 2]$  being the reasonable range.

The first-order conditions for profit maximization (making use of the relationship  $L_i = N_i + \alpha N_i^*$ ) are:

$$F_K(P + q_i v_i P') = r, \quad (5a)$$

$$F_N(P + q_i v_i P') = w - \lambda k, \quad (5b)$$

$$F_{N^*}(P + q_i v_i P') = w + \lambda(1 - k), \quad (5c)$$

and

$$(1 - k)N_i^* = kN_i. \quad (5d)$$

Noting that  $F_{N^*} = \alpha F_N = \alpha F_L$ , (5b) and (5c) together imply that  $\lambda = w(\alpha - 1)/[1 - k(1 - \alpha)]$ . Thus, these two conditions can be replaced by a single condition:

$$F_L(P + q_i v_i P') = w - wk(\alpha - 1)/[1 - k(1 - \alpha)],$$

or

$$= w/[1 - k(1 - \alpha)] \geq w. \quad (6)$$

When the handicapped requirement is met exactly, an additional efficiency unit of labor, at the margin, must be divided between the handicapped and the non-handicapped labor in the ratio  $k/(1 - k)$ . The cost of the marginal efficiency unit of labor,  $w/[1 - k(1 - \alpha)]$ , is the relevant price of the composite labor input. Put differently, the handicapped requirement acts as a tax on labor input. Not surprisingly, since  $F_K/F_L$  is independent of  $v_i$ , the least-cost combination of input does not depend on the degree of output market collusion among the firms.

### III. Handicapped Regulation, Employment, and Output

We can now examine the effects of a tightened handicapped requirement (a higher  $k$ ) on employment and output.

**PROPOSITION I.** *For a given degree of collusion, the implementation of any handicapped regulation from an initial situation of no regulatory enforcement results in an increase in the equilibrium  $N^*$ . Successively higher requirements may eventually lead to a reduction in equilibrium  $N^*$ .*

The handicapped requirement has two offsetting effects on the derived demand for handicapped workers. Firms substitute handicapped for non-handicapped workers to satisfy the regulation, while at the same time they substitute capital for the composite labor in response to the increased cost of the composite labor. For small increases in  $k$  from zero, the former always domi-

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dominant firm leadership. In this model, "the fringe" acts as a price taking firm so its conjectural variation is 1. The "dominant firm," on the other hand, can be shown to entertain a conjectural variation equal to  $es/[e - \theta^f(1 - s)]$  where  $e$  is the price elasticity of market demand,  $s$  is the market share of the dominant firm, and  $\theta^f$  is the conjectural own price elasticity of fringe supply (i.e. the dominant firm belief of how the fringe firms will change their output when the dominant firm changes its price).

nates. However, as  $k$  is increased further, the latter effect increases in importance, and  $dN_i^*/dk$  may turn negative. Nonetheless, the total response of handicapped employment to the implementation of the requirement of any magnitude, from an initial situation of no requirement, must be positive.

One important question is the extent to which the effectiveness of handicapped requirement depends on the degree of collusion among firms. To answer this question, we differentiate  $dN_i^*/dk$  with respect to  $v_i$ :

$$\partial[dN_i^*/dk]/\partial v_i < 0.$$

Recalling that firm  $i$  becomes more collusive as  $v_i$  becomes larger, we have:

**PROPOSITION II.** *The more collusive the industry, the less effective will be an increase in the handicapped requirement in raising handicapped employment.*

**PROPOSITION III.**

$$(a) \quad d(N + N^*)/dk < 0, \tag{7a}$$

$$(b) \quad dN/dk < 0, \tag{7b}$$

$$(c) \quad \text{sgn}(dK/dk) = -(\text{sgn} F_{KL}), \text{ and} \tag{7c}$$

$$(d) \quad \text{sgn}(dF/dk) = \text{sgn}(F_L F_{KK} - F_K F_{KL}). \tag{7d}$$

According to (a) and (b), a higher handicapped requirement would cause both total employment and employment of non-handicapped labor to drop. According to (c) and (d), the effects of a higher handicapped requirement on capital usage and total output are ambiguous.

Successive increases in the handicapped requirement raise the price of composite labor, which is used to determine derived labor demand. Thus, usage of composite labor must fall with increases in  $k$  because own price effects are necessarily negative for factor demands. It follows immediately that non-handicapped employment, which accounts for a declining fraction of the ever-shrinking total, must also be a decreasing function of  $k$ . As the effective price of labor rises with  $k$ , the capital usage increases if capital and labor are substitutes in production ( $F_{KL} < 0$ ), but falls if they are complements ( $F_{KL} > 0$ ). Finally, output falls with increases in  $k$  unless labor is an inferior input, i.e., unless  $(F_L F_{KK} - F_K F_{KL}) > 0$ . In words, this condition is interpreted as requiring that the proportional decrease in the marginal physical products as a result of an increase in capital input be greater for labor than for capital. This possibility is precluded if labor and capital are complements in production.

#### **IV. Handicapped Regulation and Profits**

We turn now to the effects of handicapped regulation on a firm's profits. It is convenient, with no loss of generality, to work directly with the cost function  $C(q, k)$  of each firm. It is assumed that the two firms have identical cost functions, hence the subscripts are suppressed. As our interest is in the dependence of these effects on the firm's size, we will specifically address the issue: how will a small increase in the handicapped requirement affect the profits of firms when (1) their sizes are not equal, and (2) they have different degrees of economies of scale?

*Unequal Firm Sizes*

Suppose that the market shares of these two firms are initially  $s_i \equiv q_i/(q_1 + q_2)$ ,  $i = 1, 2$ . The profit function of firm  $i$  is

$$\Pi_i = Pq_i - C. \quad (8)$$

Totally differentiating (8) and substituting yields

$$d\Pi_i = q_i dP + C_q dq_i + q_i v_i P' dq_i - dC, \quad (9)$$

where  $C_q = \partial C/\partial q_i$  and  $P' = dP/dQ$ .

Using (9) and (5), it can be readily deduced for firm  $i$  that

$$d\Pi_i/dk = \{(P - C_q + QP')/[(1 + s_i v_i)P'/s_i + v_i P'' - C_{qq}]\} - C_k/C_{qk}, \quad (10)$$

where  $C_{qq} = \partial C_q/\partial q_i$ ,  $P'' = dP'/dQ$ ,  $C_k = \partial C/\partial k$ , and  $C_{qk} = \partial C_q/\partial k$ .

The second term on the right hand side of (10) is positive by assumption. It represents the direct effect of the shift in the profit function caused by an increase in the handicapped requirement. The first term on the right hand side represents the indirect effect of the shift in the marginal profit function, which in turn changes the duopoly equilibrium. The denominator of the first term is negative if stability is to hold,<sup>4</sup> but the numerator can be of either sign.

Several interesting results emerge. First, an increase in the handicapped requirement could increase the profits of the firm if the first term is positive and large enough to swamp the second term. This is one of the most remarkable results in oligopoly theory in general and conjectural variation models in particular.<sup>5</sup>

Second, and more surprisingly, an increase in the market share of a firm will make it less likely that the firm will benefit from an increase in  $k$ . Indeed, from equation (10) we can determine a critical market share above which a firm will be hurt by the handicapped requirement, and below which the handicapped requirement will raise the profits of the firm, *ceteris paribus*. That is,

$$d\Pi_i/dk > 0 \quad \text{if } s_i < s_i^*,$$

where

$$s_i^* = P'(C_k - q_i C_{qk})/\{C_{qk}(P - C_q) + C_k[C_{qq} - v_i(P' - P'')]\}. \quad (11)$$

Summing up, we find that the handicapped requirement may turn out to be discriminatory *in favor* of firms that have the smaller market shares. This surprising result, consistent with the JEC findings, has a fundamental connection with a similar result in the theory of horizontal mergers. As Stigler [11] and others (e.g., Salant et al. [8]) have argued, firms which do not participate in a merger may benefit more than the participants. The reason is that the post-merger firm will typically reduce its production below the combined output of its constituent firms, causing industry price to rise. Nonparticipants will then expand output and profit under the umbrella of

4. See Seade [9] for a thorough discussion of the stability condition.

5. See Dixit [1], Katz and Rosen [3], Levin [4], and Stern [10].

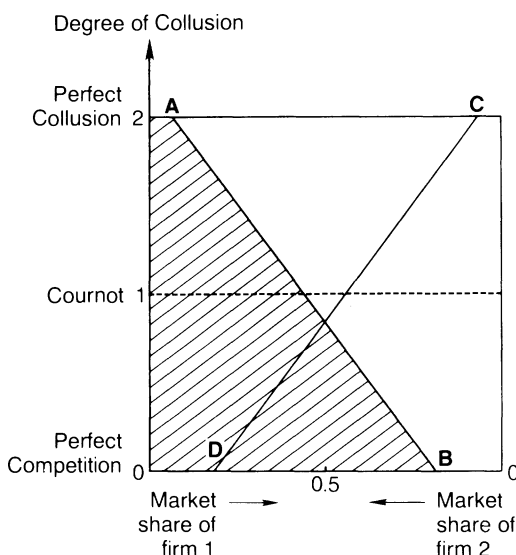


Figure 1.

the higher industry price. Thus, merger participants do not capture all of the profits that result from a merger. A similar result occurs in our model when, given industry structure, an exogenous change in costs resulting from the imposition of the handicapped requirement puts the large firms in a disadvantageous position vis-à-vis small firms.<sup>6</sup>

Figure 1 illustrates the results. The cross-hatched area below  $AB$  contains the  $(v_1, s_1)$  combinations necessary for firm 1 to benefit from an increase in  $k$ . Line  $AB$  corresponds to the initial value of  $k$  equal to zero. The higher the initial value of  $k$  is from zero, the greater will be the upward shift in the  $AB$  line, enlarging the  $(v_1, s_1)$  combinations necessary for firm 1 to benefit from an increase in  $k$ . Line  $CD$  is the counterpart of line  $AB$  for firm 2. Firm 2 will benefit from an increase in the handicapped requirement if  $(v_2, s_2)$  falls into the area to the southeast of  $CD$ .

It is obvious from Figure 1 that several outcomes are possible: (1) one firm could lose and the other gain, (2) both firms could gain, or (3) both firms could lose. Nevertheless, for any degree of collusion, the smaller firms are more likely to gain. With enough collusion, and if both firms are similar in size, they may both gain from the regulatory requirement.

*Different Degrees of Economies of Scale*

The ability of firms to bear the regulatory costs should also presumably be affected by economies of scale. To focus on the effects of economies of scale of the industry, we assume that the two firms have equal market shares,  $s_1 = s_2 = 0.5$ . This restriction assumes that economies of scale depend only on industry output. Next, we define the elasticity of economies of scale to be

$$\theta = C/q_i C_q. \tag{12}$$

In general,  $\theta$  will be greater than unity, unity, or smaller than unity when there are economies of scale, no economies of scale, and diseconomies of scale, respectively.

6. For a detailed analysis of the connection between conjectural variations and horizontal mergers, see Dung [2].



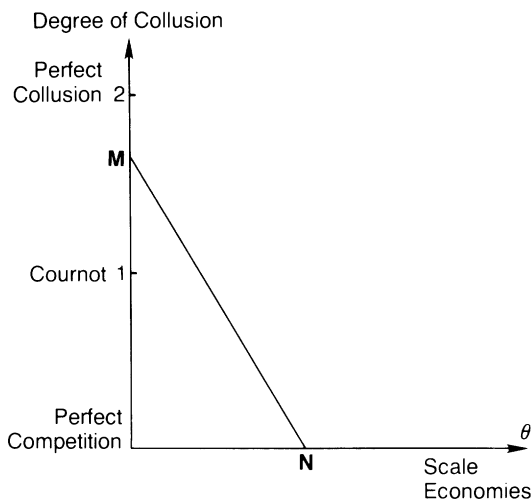


Figure 2.

Using (5), (9) and (12) we have:

$$d\Pi_i/dk = \{(P - 2C/Q\theta + QP') / [(2 + v_i)P' + v_iP'' - C_{qq}]\} - C_k/C_{qk}. \tag{13}$$

The result yielded by (13) is also counterintuitive. It says that the greater the degree of economies of scale, the smaller the likelihood that a firm could perversely benefit from an increase in the handicapped requirement. An explanation of the result can be offered along the following lines. Because industry output declines as the handicapped requirement is increased, economies of scale lose some of their advantage. The greater the initial economies of scale, the more pronounced will be the loss of advantage following a tightening of the handicapped requirement, and the more likely the firm will be hurt by the handicapped requirement. Again, we can easily compute the critical value of  $\theta$ , say  $\theta^*$ , above which the handicapped requirement will lower the profits of the firm. Formally:

$$d\Pi_i/dk > 0 \quad \text{if } \theta < \theta^*,$$

where

$$\theta^* = C_{qk}C / \{C_{qk}[P + QP''] - C_k[(2 + v_i)P' + v_iP'' - C_{qq}]\}. \tag{14}$$

Figure 2 illustrates this case. Line  $MN$  (corresponding to some initial value of  $k$ ) divides the  $(v, \theta)$ -space into two areas: To the left (right) of this line are the  $(v_i, \theta)$  combinations that would allow the firm to gain (lose) from a small increase in  $k$ . Higher initial values of  $k$  will shift the  $MN$  line to the right.

Summing up this section, we find that the handicapped requirement does discriminate among firms on the basis of size. The surprise is that smaller firms with no economies or even diseconomies of scale are not necessarily the party worse off.

**Table I.** Critical Values of Market Share  $s_i^*(v_i)$ 

$v_i$	$k = 0$	$k = 5\%$	$k = 10\%$	$k = 15\%$	$k = 20\%$
.000	3.125	3.145	3.165	3.185	3.205
.100	3.049	3.067	3.086	3.106	3.125
.200	2.976	2.994	3.012	3.030	3.049
.300	2.907	2.924	2.941	2.959	2.976
.400	2.841	2.857	2.874	2.890	2.907
.500	2.778	2.793	2.809	2.825	2.841
.600	2.717	2.732	2.747	2.762	2.778
.700	2.660	2.674	2.688	2.703	2.717
.800	2.604	2.618	2.632	2.646	2.660
.900	2.551	2.564	2.577	2.591	2.604
1.000	2.500	2.513	2.525	2.538	2.551
1.100	2.451	2.463	2.475	2.488	2.500
1.200	2.404	2.415	2.427	2.439	2.451
1.300	2.358	2.370	2.381	2.392	2.404
1.400	2.315	2.326	2.336	2.347	2.358
1.500	2.273	2.283	2.294	2.304	2.315
1.600	2.232	2.242	2.252	2.262	2.273
1.700	2.193	2.203	2.212	2.222	2.232
1.800	2.155	2.165	2.174	2.183	2.193
1.900	2.119	2.128	2.137	2.146	2.155
2.000	2.083	2.092	2.101	2.110	2.119

## V. Numerical Example

To gain additional insights into the results, we conduct a numerical analysis using specific cost and demand functions. Following the well-established professional consensus,<sup>7</sup> we employ linear demand and quadratic cost functions as first approximations of actual demand and cost conditions. Specifically, let

$$C = (1 + k)q^2$$

and

$$P = 20 - 8Q,$$

where  $Q = q_1 + q_2$ .

Table I reports the values of  $s_i^*$  computed from equation (11). Recall that  $v$  indicates the degree of collusion, which ranges from 0 (for perfect competition) to +2 (for perfect collusion); and  $k$  is the initial required ratio of handicapped workers to total employment. The body of the table gives the critical values of market share  $s_i^*$  for the corresponding pair of  $(v_i, k_i)$ .

We note that in this example the critical market share for any combination  $(v_i, k_i)$  is not very large and is rather insensitive to the initial level of the handicapped requirement ( $k$ ). Of course, market share in the one to three percent range can represent sizeable annual sales for many government contractors.

7. See, for instance, Katz and Rosen [3]. It must be noted, however, that the results we derived in previous sections are quite general. The specific functions are employed in this section as an example only.

**Table II.** Critical Values of Scale Economies  $\theta^*(v_i)$ 

$v_i$	$k = 0$	$k = 5\%$	$k = 10\%$	$k = 15\%$	$k = 20\%$
.000	.02632	.02692	.02750	.02805	.02857
.100	.02577	.02636	.02691	.02743	.02793
.200	.02525	.02581	.02634	.02684	.02732
.300	.02475	.02529	.02580	.02628	.02674
.400	.02427	.02479	.02528	.02574	.02618
.500	.02381	.02431	.02477	.02522	.02564
.600	.02336	.02384	.02429	.02472	.02513
.700	.02294	.02340	.02383	.02424	.02463
.800	.02252	.02297	.02338	.02378	.02415
.900	.02212	.02255	.02295	.02334	.02370
1.000	.02174	.02215	.02254	.02291	.02326
1.100	.02137	.02177	.02214	.02250	.02283
1.200	.02101	.02139	.02176	.02210	.02242
1.300	.02066	.02103	.02138	.02171	.02203
1.400	.02033	.02069	.02102	.02134	.02165
1.500	.02000	.02035	.02068	.02099	.02128
1.600	.01969	.02002	.02034	.02064	.02092
1.700	.01938	.01971	.02001	.02030	.02058
1.800	.01908	.01940	.01970	.01998	.02024
1.900	.01880	.01910	.01939	.01966	.01992
2.000	.01852	.01882	.01910	.01936	.01961

Using the same specific functions as in the previous case, we can also compute the critical degree of scale economies  $\theta^*$  as given by equation (14). The results are exhibited in Table II, which shows the critical value of the degree of economies of scale above which a tightening in  $k$  will *lower* firm profit.

The most striking observation from Table II is that the firms need not have economies of scale to benefit from enforcement of the handicapped requirement. Evidently, for any given concentration ratio, economies of scale will have little effect on whether a firm benefits or is hurt by the regulations. Of more importance is the degree of collusion among firms: the less collusive the firms, the higher will be the critical scale economies, i.e., the less likely that the firm will benefit from an increase in the handicapped requirement. In fact, this likelihood becomes stronger the higher the initial value of  $k$ .

## VI. Summary and Implications

In this paper we used a conjectural variations model to analyze the effects of some stylized clauses of the Rehabilitation Act of 1973. Some noteworthy conclusions were reached.

First, because of input substitutability, an increase in the handicapped requirement (beyond a certain level) was shown to actually reduce total employment.<sup>8</sup> Thus, administrative initiatives to tighten-up enforcement and get tough with violators may actually produce some counterproductive

8. In a similar framework, Levin [3] discovered that taxation to control pollution could actually create more pollution in an oligopolistic industry.

results. In any case, the analysis suggests that any regulatory efforts to create employment for the handicapped should consider focusing on the less collusive segment of the procurement market. This finding casts some doubt on the effectiveness of current practice whereby enforcement efforts appear to concentrate on the more oligopolistic industries. It must be reiterated, however, that when administrative and monitoring costs are taken into account, and especially when society has other goals, selective enforcement by concentrating on larger firms may be justified.

Even if it succeeds in creating more jobs for handicapped workers, the socioeconomic requirement may increase industry extranormal profits as output and price are nudged closer to their cartel levels. Thus, instead of using its monopsony power to force firms in the procurement market to pay for socioeconomic programs, the government may in effect help these firms earn higher profits, thus passing on the cost of these programs to other sectors of the economy.

Equally important, it is not necessarily true that smaller firms, or firms with diseconomies of scale, will suffer a loss in profits, absolutely or in comparison with larger firms. The outcome will depend on the degree of collusion in the industry. Specifically, small firms could see their profit margins increase by more than those of the large firms. Thus, the argument that “set asides” or special “regulatory relief” should be granted to small businesses to help them cope with various kinds of socioeconomic regulations should perhaps be justified on a case by case basis.<sup>9,10</sup>

It is certainly not our contention that the Federal government should abandon its responsibility to the handicapped or in meeting any of the other social goals as expressed in procurement regulations. In view of our findings, however, a prudent policy would be to consider alternative means. For example, extending the “equal protection clause” of civil rights legislation to the handicapped population may be a more effective approach. Direct government assistance to help train and increase the employability of the handicapped also deserves more serious consideration. In this regard, the Technology-Related Assistance for Individuals With Disabilities Act of 1988, introduced in the House (HR.4904) and Senate (S.2561), holds great promise. Under the provisions of the proposed Act, the Federal government would assume some financial responsibility for the development and purchase of technology specifically designed to remove employment barriers for the handicapped.

9. Needless to say, there may be other, better reasons to help small businesses.

10. See, e.g., Myles [5] for an analysis which incorporates a non-regulated sector.

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