

★

Stanford University, Stanford, California 94305

KENNETH J. ARROW
JOAN KENNEY PROFESSOR OF ECONOMICS
AND PROFESSOR OF OPERATIONS RESEARCH

March 19, 1982

Honorable Pete McCloskey
205 Cannon House Office Building
Washington, D.C. 20515

Dear Congressman McCloskey:

I endorse strongly your opposition to the Small Business Innovation Development Act, H.R. 4326/S. 881. To support your position, I would like to advance the following reasons.

Small business has indeed had an important role in diffusing innovation, in acting as a pioneer in translating scientific accomplishments into products which have improved our general wellbeing through better consumer products, improved productivity in industry, and more capable defense. Encouraging innovative and growing small businesses and remedying their comparative disadvantage in access to the capital market is a worthwhile undertaking, which has in fact been accomplished by the tax law changes in the last few years.

But it must be recognized that small businesses, by their very structure, contribute only to part of the varied set of activities subsumed under the very broad term, research and development. Basic research develops knowledge whose ultimate applicability cannot be guaranteed and which, if applicable, may well yield fruit to other firms; it is not motivated by profits derived from application and therefore will be undertaken by business, if at all, only for the immediate profit on the research contract itself. Usually, universities and in-house government laboratories are more suitable locales for basic research.

Even in the field of applications, many require large-scale development expenditures and a capability for taking high risks and working over long time horizons. There is a natural division of labor between large and small firms, with the latter having the advantage of flexibility and quick decision-making and the former that of economies of scale.

The inflexible set-aside provisions hardly do justice to the complex picture of comparative advantages and disadvantages, for which the market, with all its imperfections, offers a better measure. The fixed set-aside on total R & D budgets is likely to force a diversion in the direction of government R & D expenditures, away from basic research and large-scale R & D towards small-scale work with relatively immediate payoffs, to the detriment of governmental aims, including defense.