THE EXPORT INCENTIVE FUND: A STATE-LEVEL
EXPORT PROGRAM FOR ECONOMIC DEVELOPMENT

by

Charles E. Zech

In an attempt to discover new and innovative approaches to stimulating their economies, more and more states are recognizing the value of programs that stimulate foreign export sales of their industries. Currently, 46 states have some sort of formal export development program, with most states employing a multi-dimensional approach.

There are significant benefits accruing to a state when its companies export. The U.S. Department of Commerce has estimated that each $1 billion dollars in foreign exports creates 27,000 domestic jobs and $17 million in state and local tax revenue. It has been estimated that, per billion dollars worth of stimuli, within 18 months small business manufacturing exporters would account for 12% more employment than defense procurement, and 58% more than a taxcut (see 8, page IV). It has also been shown that states that are more foreign-export oriented show higher rates of productivity (See 11). This is the result of the greater capacity utilization, economies of scale, incentives for technological improvement, and efficient management due to competitive pressures from abroad. Finally, unlike other economic development tools, a quality export development program can be established without bringing the state into cutthroat competition with other states. In fact, states often informally join together with other states to pool their export promotion activities.

Of those states offering foreign export development programs, eight offer some variation of export financing. The purpose of this study is to introduce a new form of export financing program, the Export Incentive Fund. The nature of this program will be described, and a theoretical model will be constructed and tested empirically to determine the extent to which such a program can be expected to be successful.

Export Subsidies

Only about 25,000 of the estimated 300,000 U.S. manufacturers export at all, and of these, only 1% (primarily large multinationals) produce 85% of total U.S. exports. A number of researchers (see 2,4) have observed that the decision by a firm to enter the international marketplace is not taken on the spur of the moment, nor does it involve an all or nothing proposition. Rather, internationalization is a continuous process, with the firm gradually advancing from one level of sophistication to another in a step by step process. Attempts have been made to generalize this process by categorizing firms into various export stages. It has been argued that firms progress from one stage to the next in response to internal stimuli (such as a change in management's perception of exporting) and external stimuli (such as a change

in the terms of trade). An export subsidy program (such as an export
financing program) can serve as both an internal stimulus (by increasing
management's awareness of the company's export potential) and an external
stimulus (by reducing the cost of exporting).

Naturally, the purpose of a subsidy is to change the nature of economic
activity to achieve an outcome different from that which would have occurred
had there been no subsidy (see 9, page 15). In discussing subsidies, one must
differ between the incidence and the effectiveness of the subsidy. By the
incidence of a subsidy is meant the impact on market prices, while the
effectiveness refers to the eventual consequences for economic activity.
Besides the actual amount of expenditure, the principle costs of a subsidy are
the administrative costs and the "excess burden". The latter refers to the
losses from sub-optimal behavior on the part of economic units merely to take
advantage of the subsidy (see 9, page 10).

With any subsidy, it is important to note that some portion of the
subsidized activity would in all likelihood have been undertaken even in the
absence of the subsidy. That is, inherent in the subsidy is the potential for
a windfall gain to those who, even without the inducement of the subsidy,
would have undertaken the activity. This is known as the additionality
problem. In developing a subsidy program, policy makers must attempt, as much
as possible, to limit participation in the program to those activities which
would not otherwise have occurred.

The eight states that currently offer export financing assistance have
programs that fall into two categories: export receivables credit subsidies,
and working capital for exporting. The financing subsidy for either program
may take the form of a direct loan at below market rates, or a loan guarantee.
(See TABLE 1).

TABLE 1
State Export Financing Assistance Programs

State	Pre-Shipment Loans	Post-Shipment Loans	Pre-Shipment Guarantees	Post-Shipment Guarantees
Illinois	x	x	x	x
Indiana			x	
Minnesota			x	
Mississippi			x	
Missouri			x	
South Carolina	x		x	
Tennessee			x	
Wisconsin	x			

Source: 10

Export receivables credit subsidies are helpful since, because of competition and commercial practices, small exporters typically wait for up to 6 months to be paid. They are forced to carry this cost and risk. A post shipment loan or loan guarantee to cover this expense would enlarge the company's credit capabilities since its other assets would not have to be pledged. While the Foreign Credit Insurance Association currently provides insurance to support short-term export credit through commercial banks, many banks have been reported to resist acceptance of FCIA insurance as inadequate for non-recourse financing in view of certain FCIA regulations (See 8, page 27).

Subsidies for working capital for exports are in response to what is often found to be the most pressing need of small business - working capital. Providing small businesses with assistance of this kind, either in the form of low interest loans or loan guarantees, would permit them to more readily respond to trade opportunities.

The problem with both of these types of programs is that, while they may be effective in dealing with the problems of experienced exporters, they fail to address the two most significant obstacles preventing firms from entering international markets in the first place. These are: the lack of expertise in dealing with export transactions (discovering markets, making contacts, mastering the paperwork, etc.); and the limited availability of manpower to develop this expertise. Combined with these are the perception on the part of many small businesses that exporting is a highly risky venture. They are reluctant to devote resources to a risky function where they have little expertise.

The Export Incentive Fund

In response to these fears, a type of firm has evolved to service the smaller exporters. These firms are called export management companies (EMC'S). In effect they serve as a company's export department, providing it with all the services that a larger corporation would expect from its own internal export department. Among the services and assistance offered by an EMC to its clients are:

1) Research foreign markets.
2) Travel overseas to determine the best method of distributing the product.
3) Prepare advertising and sales literature and adjust it to overseas requirements.
4) Appoint distributors in foreign countries.
5) Exhibit the client's products at international trade shows.
6) Handle the routine details in getting the product to the foreign country.

Many smaller firms that aren't large enough to operate an export department or don't want to get involved in the details of exporting are able to export profitably through the use of an EMC.

The Export Incentive Fund (EIF) is a state-level export development program whose purpose is to induce small businesses to utilize the services of an EMC. The inducement takes the form of funding, provided by the state and matched by the manufacturer, to be used to pay for the services of an EMC. The EMC is contracted to provide all the services it normally provides for a client. To minimize the problem of additionality, the funding is available

only for products that have never been exported; or for new markets for previously exported products.

The funding provided by the state is not in the form of a loan or a grant; nor does it represent an equity claim. Rather, the state is providing seed money, to share with the manufacturer the cost of developing a new foreign market for its product. In return, the state receives from the manufacturer a small royalty on any resulting sales. It is recognized that in some instances the EMC will be unable to find a foreign market for the firm's product, and no new foreign sales will result. In that event, the manufacturer will owe the state nothing. However, it is expected that the revenues from successful projects will compensate the fund for the unsuccessful ones, and thus allow it to revolve. Through this royalty approach, the state receives a return related only to the success of each project.

The specific royalty formula must be structured to provide the firm with the maximum incentive to expedite foreign market development. At the same time, the program should feature some flexibility to allow for individual cases. To compensate the fund for projects which provide no revenue, the state will expect to receive a return greater than its initial financing for those projects which are successful.

Recognizing that developing foreign markets takes time, the royalty formula may call for the state to receive 2% of any foreign sales resulting from its involvement for a period of 3 years. However, if the total payment to the state comes to 3 times the state's original contribution after 2 years, the fund will be considered to have been adequately compensated, and the royalty agreement will end. If the total repayment amounts to 2 times the state's contribution after 2 years, the royalty rate will be reduced to 1% of sales for the final year.

To ensure that the EMC properly represents the client, a contract with the EMC is signed specifying the exact services the EMC will provide. These services are divided into stages. The EMC has a natural tendency to provide firms with the highest quality representation possible. The requirement of a written report at each stage of the process serves to reinforce this tendency and guarantees that the manufacturer and the state are being properly represented.

If, at any time, in the EMC's professional judgement there exists no foreign market for the firm's product, the contract will terminate. The EMC will be paid for the services rendered up to that point.

The EIF fills a critical gap in the export process. Exporting can be very profitable for a small firm. Yet, since there exists the risk that no foreign markets will be found, few small firms are willing to commit a significant amount of working capital or management time to exploring export possibilities. THERE IS NO PLACE FOR THEM TO TURN FOR FINANCIAL ASSISTANCE TO HELP REDUCE THE RISK. Commercial banks with international departments stand ready to provide funding for export transactions. But they are unwilling to commit themselves to financing a more speculative activity such as investigating the potential for exporting. Both the Small Business Administration and the Export-Import Bank have pre-export financing programs. But these funds are to be used for purposes such as pre-shipment production marketing, with the implication that the firm already has an established export market.

The services offered by international banks, the Small Business Administration and the Export-Import Bank are those that are most advantageous once a firm has been exporting. They are not appropriate for companies

exploring the export market. In other words, these are the types of programs that would be helpful to a firm that has "graduated" from the market analysis stage supported by the EIF and is in a position to begin exporting products or services.

One may question the EIF's royalty approach versus a straight grant or loan program. Both of these approaches have their merits. However, the awarding of grants could lead to too many frivolous applications for "free money". The risk to the taxpayer would be unacceptable. Also, a grant program would require periodic injections of new revenue to maintain the fund. And, given the uncertainty of the success of opening a new export market, a loan program is less desirable since firms would be reluctant to commit themselves to a program where they're required to repay the funds even if their investigation into exporting leads to no return.

A royalty arrangement strikes the best balance. Since the firm is required to provide matching funds and possibly a payback, only those firms seriously interested in exporting apply. On the other hand, since the firm's exposure is limited to its matching contribution in the event the project does not prove to be successful, more firms are willing to bear the risk than would be the case if the entire cost of the gamble had to be borne by the potential exporter. The fact that the firm's payback occurs only to the extent that the project is successful also proves to be an attractive feature.

The Model

In order to evaluate the effects of the EIF, a model will be theoretically developed and empirically tested.

Following the literature (see 5, 6, 7) the model takes the theoretical form of a supply function for a constant cost industry. The dependent variable measures the quantity of exports supplied. The independent variables include a measure of the price of exports (actually the price of exports relative to the domestic price level, Px/Pd (see 6, page 276)) as well as measures of various costs. The specific cost variables include those measuring the price of raw materials (Pr) the cost of production labor (Pl) the cost of marketing the product overseas (Pm) and the interest rate (R). Thus, the model takes the form

$$Qx_s = f(Px/Pd, Pr, Pl, Pm, R) \qquad (1)$$

In order to avoid the problem of varying magnitudes in measuring the variables, all the variables are measured by an index:

Qx_s is measured by an index of foreign exports, base 1977
Px is measured by an index of foreign export prices, base 1977
Pd is measured by CPI-U, base 1967
Pr is measured by the PPI for industrial commodities, base 1967
Pl is measured by the hourly wage of manufacturing workers, base 1977
Pm is measured by a proxy, the hourly wage of service workers, base 1977
R is measured by the prime rate, indexed to a base of 1977

All the data were collected from the Survey of Current Business on a monthly basis for the period January 1980 to June 1984. To allow for the erratic behavior of monthly observations all the data were adjusted by

computing a five period moving average. To avoid the problem of serial
correlation, all the variables were adjusted by dividing the value of each
observation by the value of the previous observation.[2] Finally, the natural
log of each variable was taken.

   In testing the model, the important considerations are the export price
coefficient and the marketing price proxy coefficient. In order for the EIF
to be an effective stimulus to export, the reduction in marketing costs
resulting from the EIF matching payment must have a greater impact than the
decreased effective export price resulting from the royalty arrangement. Also
of interest will be the interest rate coefficient, since programs affecting
interest rates are the alternative to the EIF.

   The empirical results of testing the model are shown in Table 2.[3]

<div align="center">

Table 2

Empirical Results of
Export Supply Model

</div>

Variable	Coefficient	T-Value
Constant	.87	1.41
Px/Pd	.01	1.78
Pr	2.19	3.49
Pl	−1.14	.88
Pm	−2.49	1.96
R	− .03	.17

$F = 4.36 \quad R^2 = .30$

$D-W = 1.94$

   There was no significant multicollinearity.

   The coefficient for the price of raw materials was significant at the .99
level, while the coefficients for the export price ratio and marketing costs
were significant at the .90 level. Since the equation was estimated in a
log-linear form, the estimated coefficients can be interpreted as the
respective elasticities.

Evaluation of Empirical Results

   In evaluating the empirical results reported in Table 2, two facts are
important:

   1)   The interest rate coefficient is insignificant.
   2)   While both the export price variable and the marketing cost proxy
        are quite elastic, the marketing cost proxy is more elastic.[4]

These two facts have significant policy implications. First, since the interest rate coefficient is insignificant, it could be surmised that a state-level export development program to subsidize a manufacturer's interest rate costs, whether it be via a low interest loan or loan guarantee; and whether it be for pre-export working capital or post-export receivables, would not be an effective stimulant to foreign exports.

Second, since the export marketing proxy is more elastic than the export price variable, a program such as the EIF, would be effective in stimulating exports. This would certainly be true if the decrease in marketing costs was greater than or equal to the effective decrease in export price. In fact, since the dollar for dollar matching requirement of the funding element of the EIF implies a 50% decrease in export marketing costs, while a typical royalty arrangement may require only a one or two percent decrease in effective export price, a program of this type should be a major stimulus to a state's foreign exports.

Summary and Conclusion

This study has introduced the concept of the Export Incentive Fund, a tool for state economic development agencies to stimulate foreign exports. The program provides a matching payment to a manufacturer to finance the hiring of an export management company. It is expected that the availability of the funding would induce some small businesses, who are reluctant to enter foreign markets because of their lack of manpower and fear of the risks involved, to seriously consider foreign export sales.

The matching funds provided to the manufacturer are neither a grant nor a loan. They are not considered a grant, since it is anticipated that the fund will be replenished through a royalty arrangement. Nor should these funds be considered a loan, since the fund is compensated only to the extent that the manufacturer is successful in increasing foreign sales. Rather, the funding must closely resembles seed money to help the manufacturer break into a foreign market.

In this study, a foreign export supply model was constructed and empirically tested. The testing demonstrated that a program such as the EIF can be effective in increasing foreign exports. This conclusion was reached because the estimated coefficients indicated that the decrease in foreign marketing costs resulting from the funding more than offset any effect from a decreased export price resulting from the royalty arrangement.

FOOTNOTES

[1] The four states not currently supporting a foreign export development program are Idaho, Nevada, South Dakota, and Wyoming.

[2] This was done in lieu of taking the first difference to permit the log transformation.

[3] These empirical results reflect the best estimates of a number of various other model formulations, including a number of various lag structures.

[4] The export price elasticity estimated in this study is consistent with that estimated in other, similar studies such as 5, 6, and 7.

REFERENCES

[1] Basevi, Giorgio, "Commodity Trade Equations in Project Link," in R. Ball, Editor, The International Linkage of National Economic Models. Amsterdam: North-Holland Publishing Company, 1973, pp. 227-81.

[2] Bilky, Warren J. and George Tesar "The Export Behavior of Smaller-Sized Wisconsin Manufacturing Firms", Journal of International Business Studies, 8 (Spring-Summer 1977), pp. 93-98.

[3] Bohi, Douglas R. "Export Subsidies and U.S. Exports: An Analysis of the U.S. EX-IM Bank", in Joint Economic Committee of the Congress of the United States, "The Economics of Federal Subsidy Programs, Part 2 - International Subsidies". Washington D.C.: U.S. Government Printing Office, 1972, pp. 157-75.

[4] Czinkota, Michael R. Export Development Strategies. New York: Praeger, 1982.

[5] Dunlevy, James A. "A Test of the Capacity-Pressure Hypothesis Within a Simultaneous Equations Model of Export Performance". Review of Economics and Statistics 62 (February 1980), pp. 131-35.

[6] Goldstein, Morris and Mohsin Kahn. "The Supply and Demand for Exports: A Simultaneous Approach", Review of Economics and Statistics 60 (May 1978) pp. 275-86.

[7] Haynes, Stephen E. and Joe A. Stone. "Specification of Supply Behavior in International Trade", Review of Economics and Statistics 65 (November 1983), pp. 626-32.

[8] Moore, David H., Arthur L. Domike, and Ronald E. Muller. "Export Financing For Small Business", Unpublished Paper Prepared for the Technical Assistance Division, Economic Development Administration, U.S. Department of Commerce, 1983.

[9] Organization for Economic Cooperation and Development, Transparency for Positive Adjustment, Paris: OECD, 1983.

[10] U.S. Small Business Administration, "State Export Promotion Activities", October 1984.

[11] Zech, Charles E. "Sub-national Foreign Export Development and its impact on Productivity", Unpublished paper presented at Midwest Economic Association Annual Meetings, April 1984.

91