EXEMPT 15(1)

c) Technological Factors

New technology incorporating state-of-the-art computer-assisted equipment has been introduced in the early production stages, but sewing continues to be labour intensive. Canadian use of such technology compares favourably with that in place in other developed countries.

The application of new technologies (e.g. CAD/CAM, robotics, micro electronics, lasers) to the clothing industry offers the potential to transform that industry into a capital intensive one where developed countries can offset the low wage advantage enjoyed by low-cost countries and recapture their markets. As a result, ambitious, large-scale R & D programs aimed at applying new technologies to the clothing industry have been launched in the past couple of years by several developed countries with large budgets and with strong support by their governments.

In 1982, Japan initiated a nine-year R & D project with a budget of some U.S. $60 million aimed at developing a fully automated sewing system. At about the same time, the U.S.A. embarked on an R & D project with the initial goal of producing an automated machine capable of sewing a man's coat sleeve, one of the most complex sewing operations. That research is sponsored by a group of apparel, textiles and fibre manufacturers, labour and the U.S. Department of Commerce. The budget grew steadily from U.S. $400,000 in 1982 to reach $7 million for 1985/86, with half of the funds coming from the U.S. government. The results were reported to be very encouraging and a prototype sewing system (involving moving sewing machines that are automatically directed by cameras and computers) was developed and tested in a factory. The research has since been expanded to cover other sewing operations and to reduce the cost of the prototype system. This revolutionary sewing system is expected to reach the market in the next three years.

In Europe, R & D work is carried out at two levels: the EEC level and the national level. The EEC's R & D project has a budget of $35 million over four years and seeks to encourage cross-sector, cross-border research by providing up to 50 percent of the cost of approved research projects (i.e. the total cost will exceed $70 million). At the national level, France, Germany, the U.K., Italy and Sweden are vigourously undertaking R & D in this field with substantial support from governments (except Italy). At a third level, Sweden, France and the U.K. are currently negotiating an agreement to participate in a new joint R & D program.

No R & D is performed in Canada at the present time in this field.

One major challenge of the push for automation in this industry is the need for great flexibility (to satisfy fashion/style requirements) to permit economic production of short runs of a wide variety of garments. Another key challenge is to bring down the cost of the new technology to within financial reach of the typically small clothing firms.

FEDERAL AND PROVINCIAL POLICIES

Government measures and policies as they impact on the clothing industry include relatively high tariffs, import quotas as well as CIRB's sector firm and a labour adjustment assistance program.