DOC TRADE POSITION STUDY - PHASE 3

THE IMPACT OF TRADE BARRIERS ON PRODUCTION AND CONSUMPTION

In

Telecom and
Computer Equipment

September, 1985

The Canada Consulting Group Inc.

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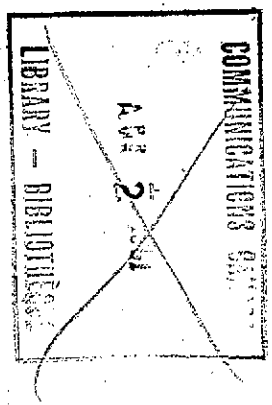
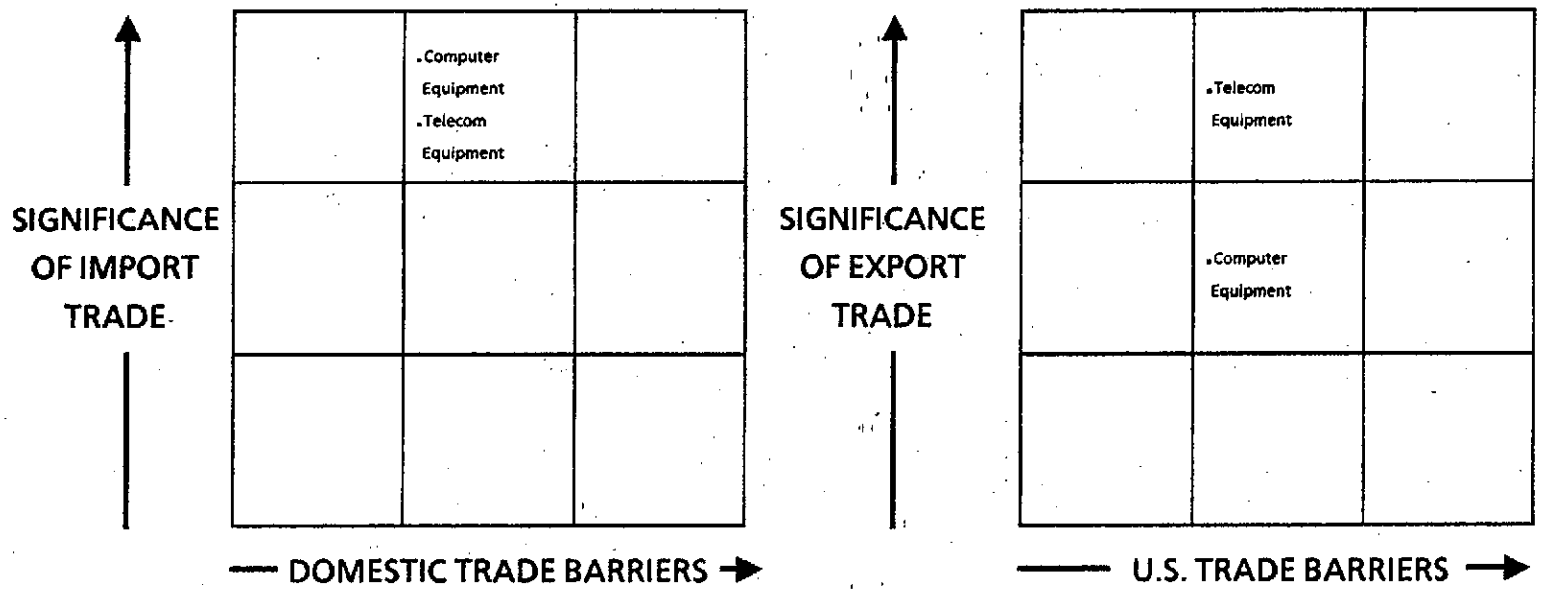


September, 1985

The purpose of this document is to examine the impact of trade barriers on the production and consumption of telecom and computer equipment in the Canadian economy

PHASES 1 AND 2A OF THE DOC TRADE POSITION STUDY CONCLUDED THAT COMPUTER EQUIPMENT AND TELECOM EQUIPMENT HAVE A SIGNIFICANT ROLE IN TRADE

DOC TRADE POSITION STUDY

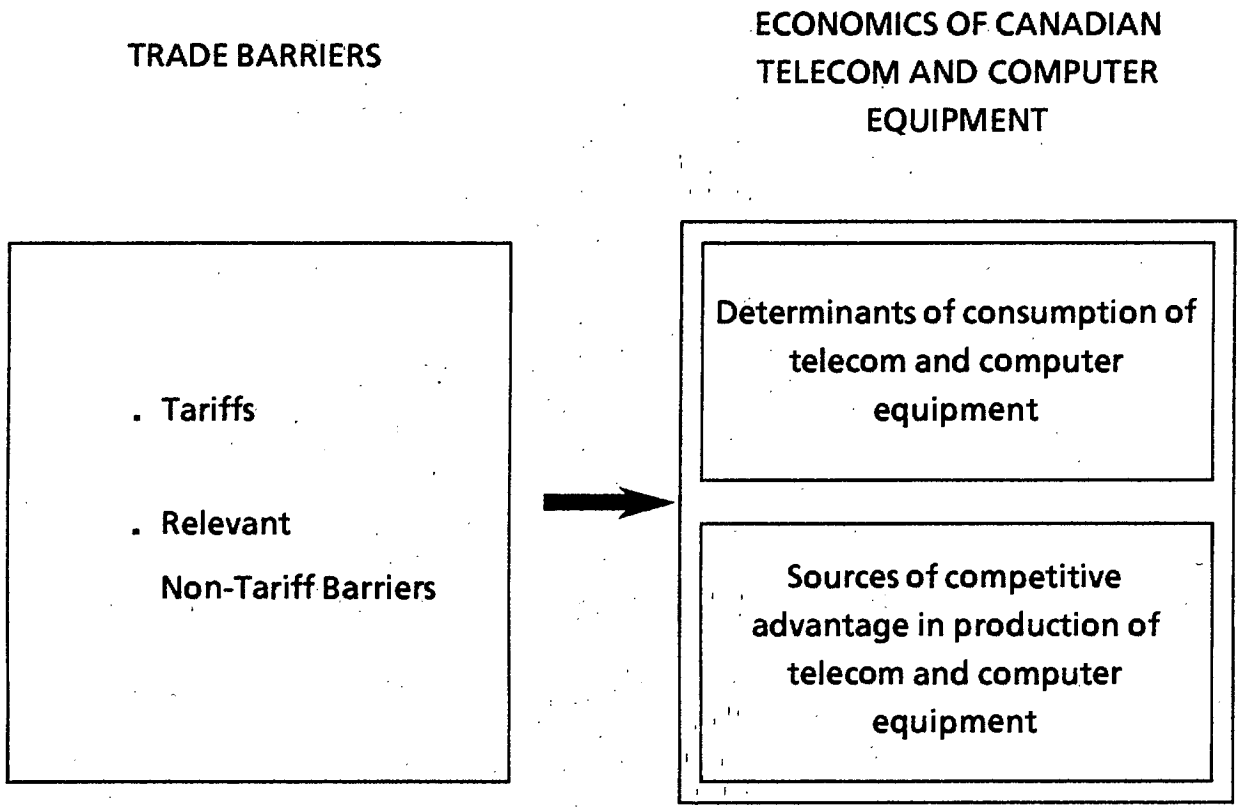


MORE SPECIFICALLY, IN PHASE 2A, TARIFF AND NON-TARIFF BARRIERS IN TELECOM AND COMPUTERS WERE FOUND TO BE OF EQUAL IMPORTANCE IN BOTH CANADA AND THE UNITED STATES

DOC TRADE POSITION STUDY
TARIFF AND NON-TARIFF BARRIERS - SUMMARY

	TELECOM EQUIPMENT		COMPUTER EQUIPMENT	
	CANADA	U.S.	CANADA	U.S.
Tariff Barriers (1987)	Telegraph Equipment and Parts 10.2% Telephone Apparatus 17.5% Radio Telegraphic Equipment 10.2% Television Apparatus and Parts 11.0% Communication Satellites 11.0%	Telegraph Equipment and Parts 5.6% Telephone Apparatus 8.5% Radio Telegraphic Equipment 2.4-8.0% Television Apparatus and Parts 3.6% Communication Satellites -	EDP Machines and Parts 3.9% EDP Peripherals and Parts - Office Machines -	EDP Machines and Parts 3.9% EDP Peripherals and Parts 3.9% Office Machines 2.0-3.7%
Non-Tariff Barriers	• Bell Canada/Nortel relationship • Federal and provincial procurement • Government assistance programs (e.g., PEMD) • Tax incentives for R&D	• Residual AT&T linkages • U.S. military and space programs • R&D/high tech "incubator" parks • Export marketing assistance • State and local venture capital financing	• Federal and provincial procurement • Government assistance(e.g., PEMD) • Tax incentives for R&D	• U.S. military and space programs • R&D/high tech "incubator" parks • Export marketing assistance • State and local venture capital financing
Significance of Barriers	Medium	Medium	Medium	Medium

THIS DOCUMENT INVESTIGATES THE IMPACT OF TRADE BARRIERS - BOTH DOMESTIC AND FOREIGN - ON THE ECONOMICS OF TELECOM EQUIPMENT AND COMPUTER EQUIPMENT



THIS DOCUMENT IS PRESENTED IN FOUR SECTIONS

I. DOMESTIC CONSUMPTION, NOT PRODUCTION, BEST DESCRIBES THE ROLE OF THE TELECOM AND COMPUTER EQUIPMENT SECTORS IN CANADA

II. CANADIAN CONSUMPTION OF TELECOM AND COMPUTER EQUIPMENT IS NEGATIVELY AFFECTED BY TARIFFS AND PREFERENTIAL PROCUREMENT

III. THE IMPACT OF TRADE BARRIERS ON THE COMPETITIVENESS OF THE TELECOM AND COMPUTER EQUIPMENT INDUSTRIES IS BUFFERED

IV. BILATERAL REMOVAL OF TELECOM AND COMPUTER EQUIPMENT TRADE BARRIERS WOULD HAVE A MIXED IMPACT ON CANADIAN PRODUCTION BUT A POSITIVE IMPACT ON CANADIAN CONSUMPTION

I. DOMESTIC CONSUMPTION, NOT PRODUCTION, BEST DESCRIBES THE ROLE OF THE TELECOM AND COMPUTER EQUIPMENT SECTORS IN CANADA

A. The telecom and computer equipment sectors in Canada are much smaller than their American counterparts and rely on trade to satisfy domestic needs

B. The strategic significance of the telecom and computer equipment sectors to Canada arises from domestic consumption requirements

A. THE TELECOM AND COMPUTER EQUIPMENT SECTORS IN CANADA ARE MUCH SMALLER THAN THEIR AMERICAN COUNTERPARTS AND RELY ON TRADE TO SATISFY DOMESTIC NEEDS

Recalling the work of Phases 1 and 2B, U.S. shipments of telecom and computer equipment dwarf Canadian shipments

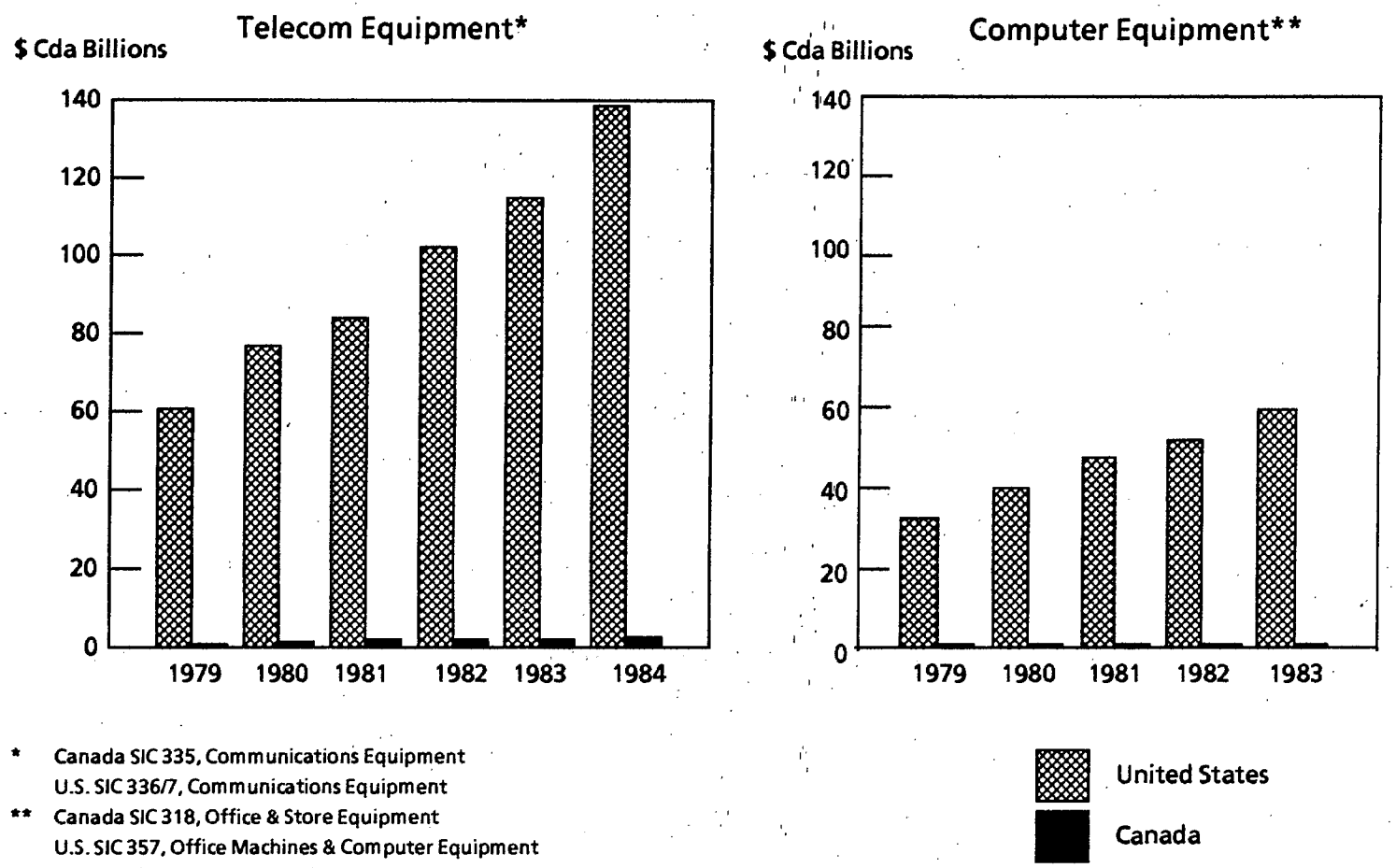
Even U.S. spare production capacity in the two sectors is significantly greater than Canadian shipments

Canada-U.S. trade in telecom and computer equipment is highly significant to Canada but considerably less so for the United States

Canada relies on trade in both sectors to supply domestic consumption

RECALLING THE WORK OF PHASES 1 AND 2B, U.S. SHIPMENTS OF TELECOM AND COMPUTER EQUIPMENT DWARF CANADIAN SHIPMENTS

INDUSTRY SHIPMENTS - CANADA AND U.S.



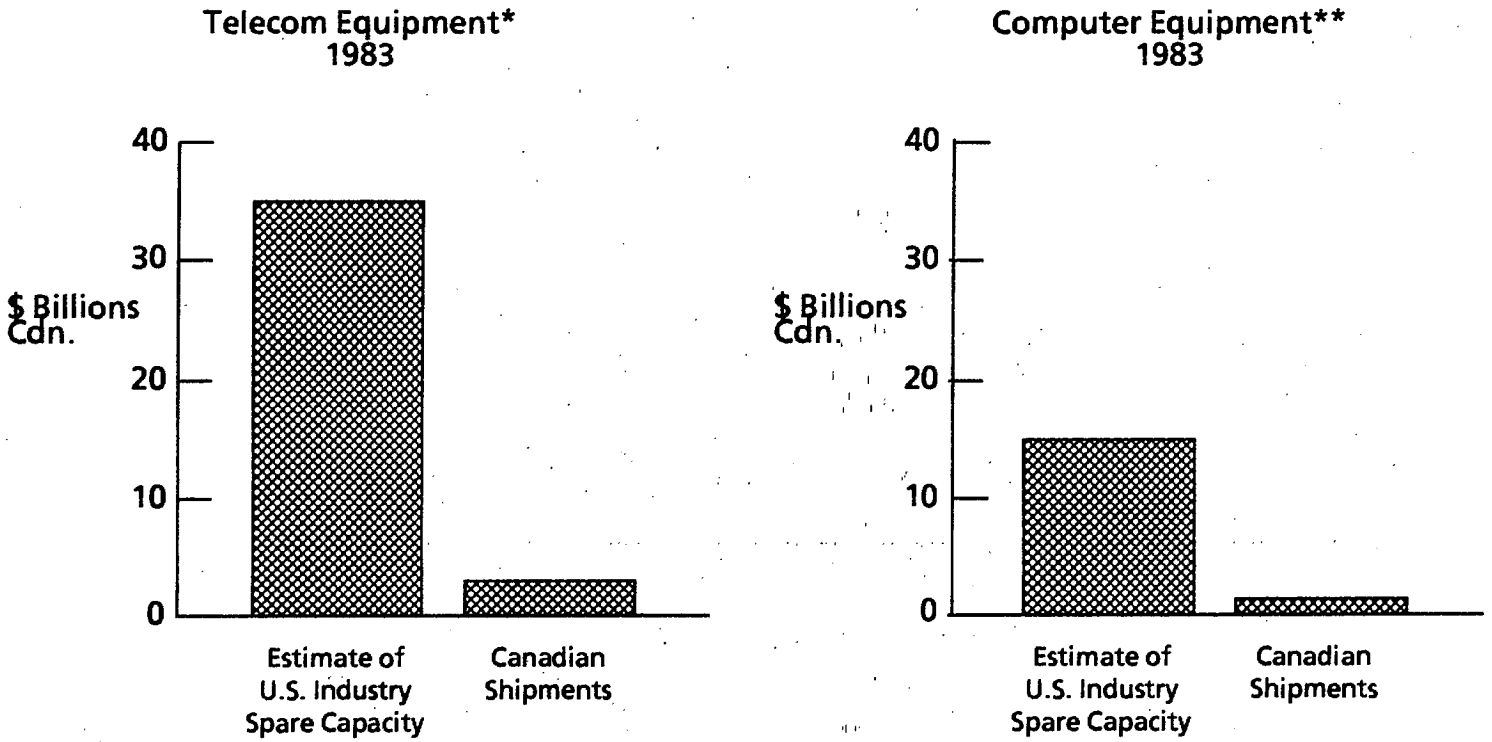
* Canada SIC 335, Communications Equipment
U.S. SIC 336/7, Communications Equipment

** Canada SIC 318, Office & Store Equipment
U.S. SIC 357, Office Machines & Computer Equipment

Source: Canada Consulting based on Statistics Canada data and US government sources

EVEN U.S. SPARE PRODUCTION CAPACITY IN THE TWO SECTORS IS SIGNIFICANTLY GREATER THAN CANADIAN SHIPMENTS

CAPACITY COMPARISONS



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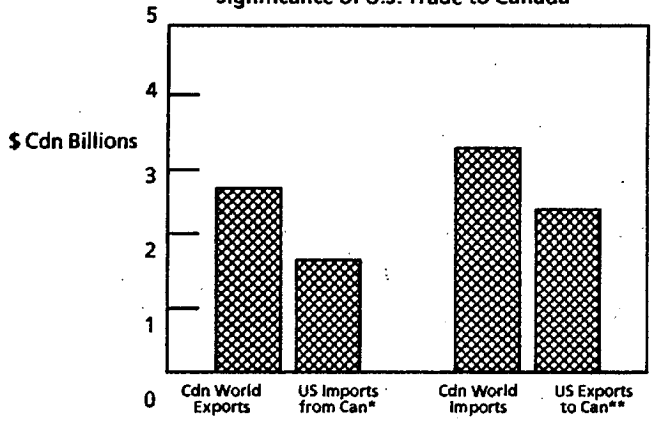
Source: Canada Consulting based on Statistics Canada data and US govefnment sources

CANADA-U.S. TRADE IN TELECOM AND COMPUTER EQUIPMENT IS HIGHLY SIGNIFICANT TO CANADA BUT CONSIDERABLY LESS SO FOR THE UNITED STATES

SIGNIFICANCE OF TRADE: 1984

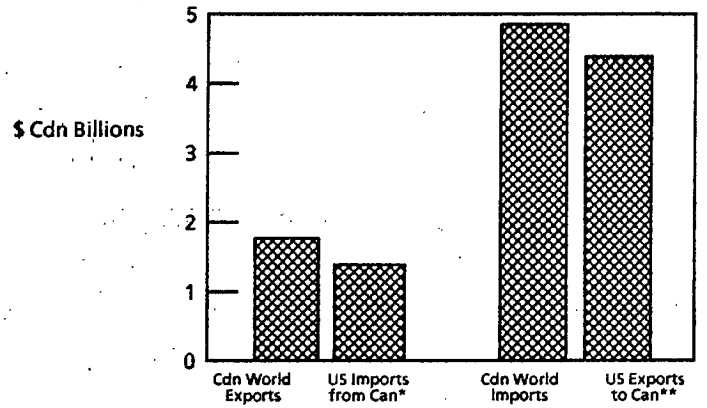
Telecom Equipment*

Significance of U.S. Trade to Canada

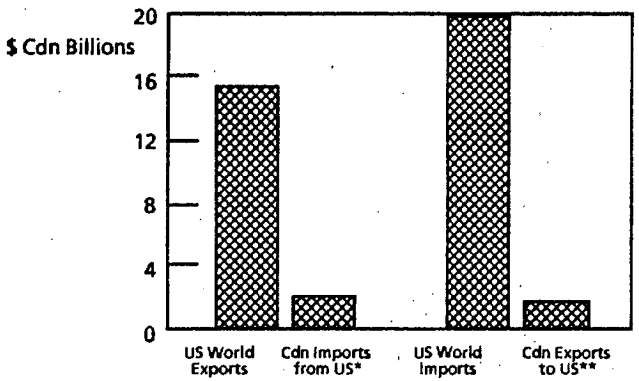


Computer Equipment**

Significance of U.S. Trade to Canada



Significance of Canadian Trade to the U.S.



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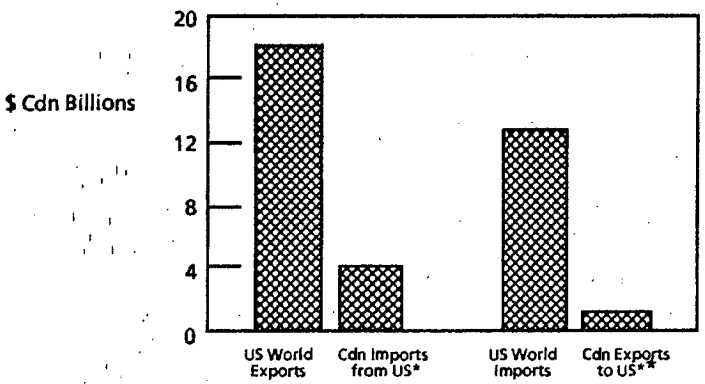

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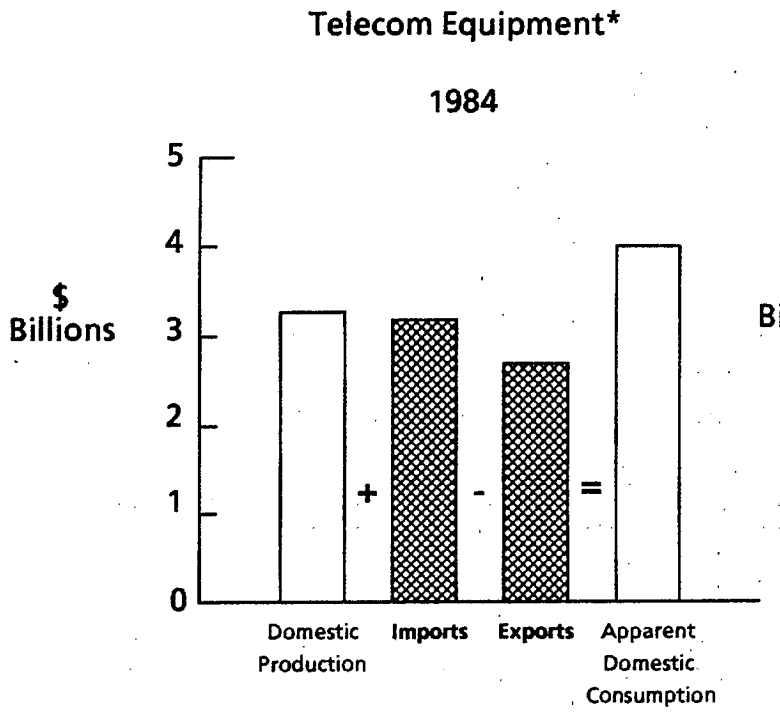
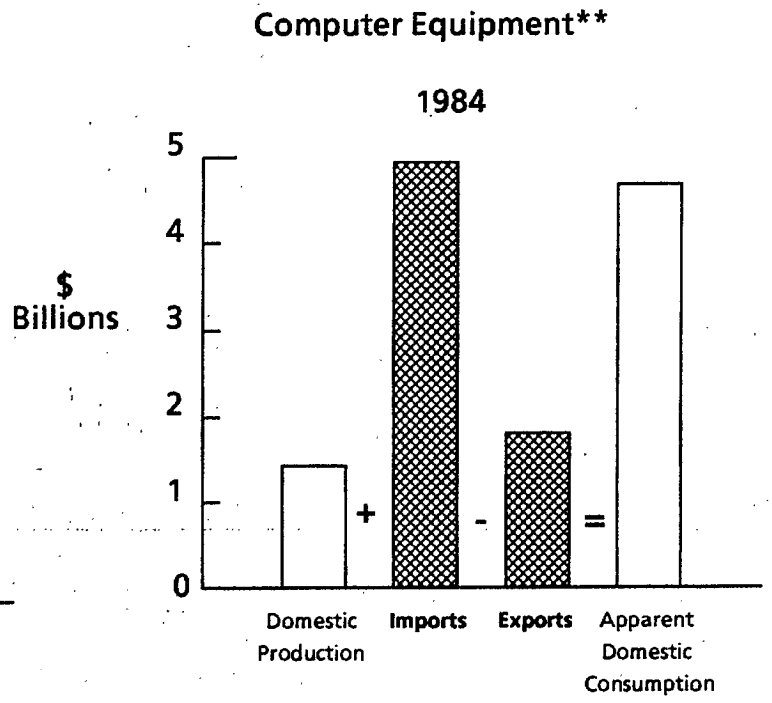
Source: Canada Consulting based on Statistics Canada data and US government sources

CANADA RELIES ON TRADE IN BOTH SECTORS TO SUPPLY DOMESTIC CONSUMPTION

CANADIAN COMPONENTS OF APPARENT DOMESTIC CONSUMPTION
DOMESTIC SHIPMENTS, IMPORTS AND EXPORTS





* Canada SIC 335, Communications Equipment
** Canada SIC 318, Office & Store Equipment

Source: Canada Consulting based on Statistics Canada data

B. THE STRATEGIC SIGNIFICANCE OF THE TELECOM AND COMPUTER EQUIPMENT SECTORS TO CANADA ARISES FROM DOMESTIC CONSUMPTION REQUIREMENTS

The current significance to Canada of domestic production of telecom and computer equipment is low

The strategic significance of telecom and computer equipment is low as measured against production-oriented variables, but high against those which are consumption-oriented

THE CURRENT SIGNIFICANCE TO CANADA OF DOMESTIC PRODUCTION OF TELECOM AND COMPUTER EQUIPMENT IS LOW

PRODUCTION SIGNIFICANCE TO CANADA
TELECOM & COMPUTER EQUIPMENT

	Value-added		Employment	
	1978	1982	1978	1982
	($Billions)		(Thousands)	
Total Canadian Economy	$224.8	$330.0	9,987	10,644
All Manufacturing	51.5	69.0	1,310	1,212
Communications Equipment - including Telecom Equipment	1.0	2.0	24	30
Office & Store Machinery - including Computer Equipment	0.2	0.5	5	6

Source: Canada Consulting based on Statistics Canada data

THE STRATEGIC SIGNIFICANCE OF TELECOM AND COMPUTER EQUIPMENT IS LOW AS MEASURED AGAINST PRODUCTION-ORIENTED VARIABLES, BUT HIGH AGAINST THOSE WHICH ARE CONSUMPTION-ORIENTED

CURRENT RELATIVE STRATEGIC SIGNIFICANCE TO CANADA

Production-oriented Variables	Telecom Equipment	Computer Equipment
Jobs	Low	Low
Value-added to Economy	Low	Low
Balance of Trade	Low	Low
Human Capital Development	Moderate	Moderate
National Identity	Moderate	Moderate
Consumption-oriented Variables		
Technology Diffusion	High	High
Infrastructure	High	High

II. CANADIAN CONSUMPTION OF TELECOM AND COMPUTER EQUIPMENT IS NEGATIVELY AFFECTED BY TARIFFS AND PREFERENTIAL PROCUREMENT

A. Trade barriers play an indirect role in influencing Canadian consumption of telecom and computer equipment

B. The impact of tariff and non-tariff barriers on Canadian consumption of telecom and computer equipment is mixed

A. TRADE BARRIERS PLAY AN INDIRECT ROLE IN INFLUENCING CANADIAN CONSUMPTION OF TELECOM AND COMPUTER EQUIPMENT

Consumption of high technology products in Canada is determined by three factors: demand, cost and availability

Trade barriers that exist in the telecom and computer equipment industries influence consumption indirectly, in so far as they affect demand, cost and availability

We will evaluate the impacts of Canadian and U.S. tariff and non-tariff barriers on Canadian consumption of high technology products

CONSUMPTION OF HIGH TECHNOLOGY PRODUCTS IN CANADA IS DETERMINED BY THREE FACTORS: DEMAND, COST AND AVAILABILITY

DETERMINANTS OF CONSUMPTION

DEMAND

- Intrinsic, strategic need for a product or component
- Demand dimension independent of cost
- Response to competitive needs such as capability, performance, productivity, customer service, cost reduction, etc.

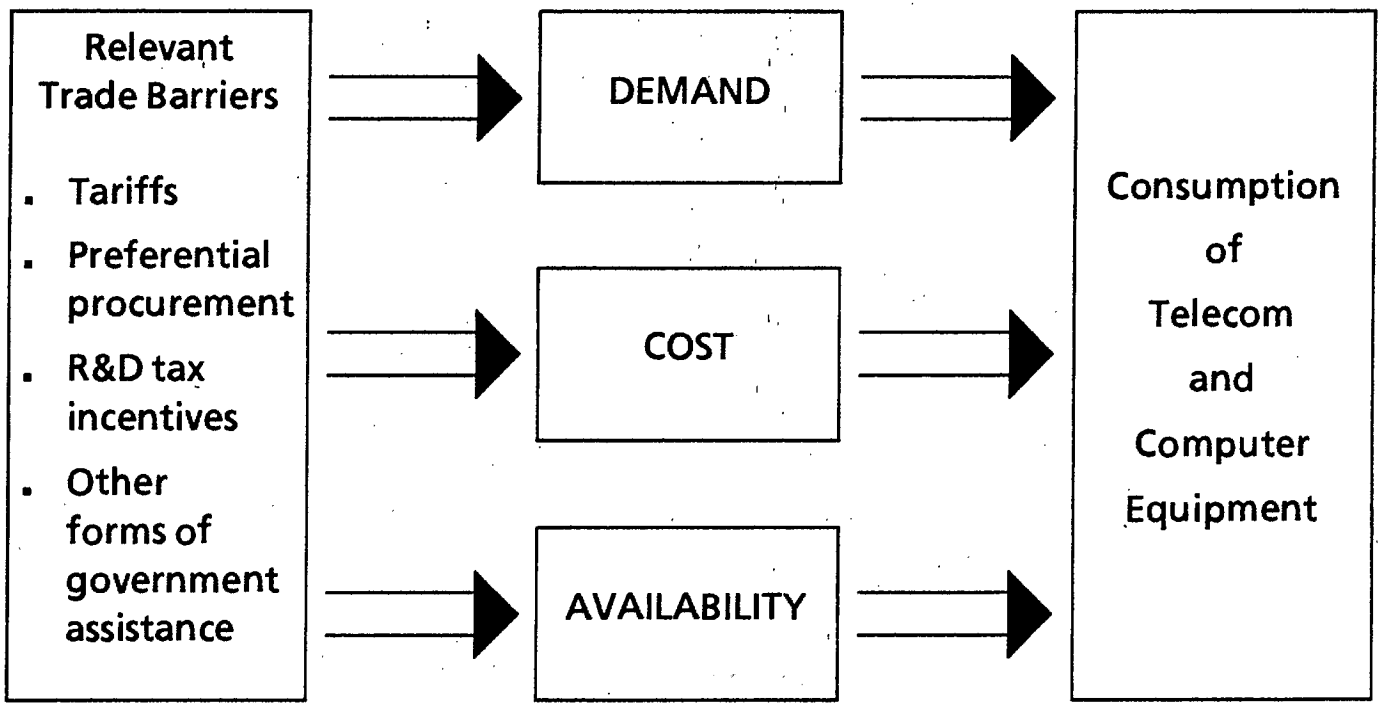
COST

- Lower cost tends to increase demand
- Value or price/performance tradeoffs are important: "not just the sticker price"

AVAILABILITY

- Ability to purchase
- Key related issues include:
  - -product quality
  - - lead times
  - - supplier competence, reliability and proximity
  - - quality and timeliness of service
  - - alternate sources of supply and service

TRADE BARRIERS THAT EXIST IN THE TELECOM AND COMPUTER EQUIPMENT INDUSTRIES INFLUENCE CONSUMPTION INDIRECTLY, IN SO FAR AS THEY AFFECT DEMAND, COST AND AVAILABILITY

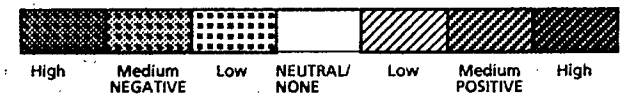


WE WILL EVALUATE THE IMPACT OF CANADIAN AND U.S. TARIFF AND NON-TARIFF BARRIERS ON CANADIAN CONSUMPTION OF HIGH TECHNOLOGY PRODUCTS

TELECOM AND COMPUTER EQUIPMENT

Impact of Canadian and U.S. Trade Barriers on Canadian Consumption

		IMPACT SUMMARY	EXPLANATION
DETERMINANTS OF CONSUMPTION — Demand	CDA		
	USA		
Cost	CDA		
	USA		
Availability	CDA		
	USA		
OVERALL	CDA		
	USA		



B. THE IMPACT OF TARIFF AND NON-TARIFF BARRIERS ON CANADIAN CONSUMPTION OF TELECOM AND COMPUTER EQUIPMENT IS MIXED

Tariffs raise the cost of telecom and computer products

Preferential procurement can have mixed impacts on consumption in Canada

R&D tax incentives, in both Canada and the U.S., have modestly encouraged the consumption of technology products by Canadians

Similarly, government assistance programs also promote consumption

In summary, while R&D tax incentives and government assistance may encourage Canadian consumption, Canadian tariffs have more significant negative impacts on consumption

TARIFFS RAISE THE COST OF TELECOM AND COMPUTER PRODUCTS

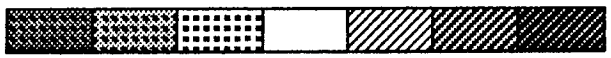
TARIFFS: TELECOM AND COMPUTER EQUIPMENT

Impact of Canadian* Tariffs on Canadian Consumption

DETERMINANTS OF CONSUMPTION		TARIFFS: IMPACT SUMMARY	EXPLANATION
Demand	CDA		No impact
	USA		*
Cost	CDA		Increased cost of imported products and components
	USA		*
Availability	CDA		No impact
	USA		*
OVERALL	CDA		Although tariffs raise cost, strategic demand for high tech products is somewhat price inelastic, especially the case for regulated telecom equipment purchasers
	USA		*

*Impact of U.S. tariffs on Canadian consumption is insignificant.

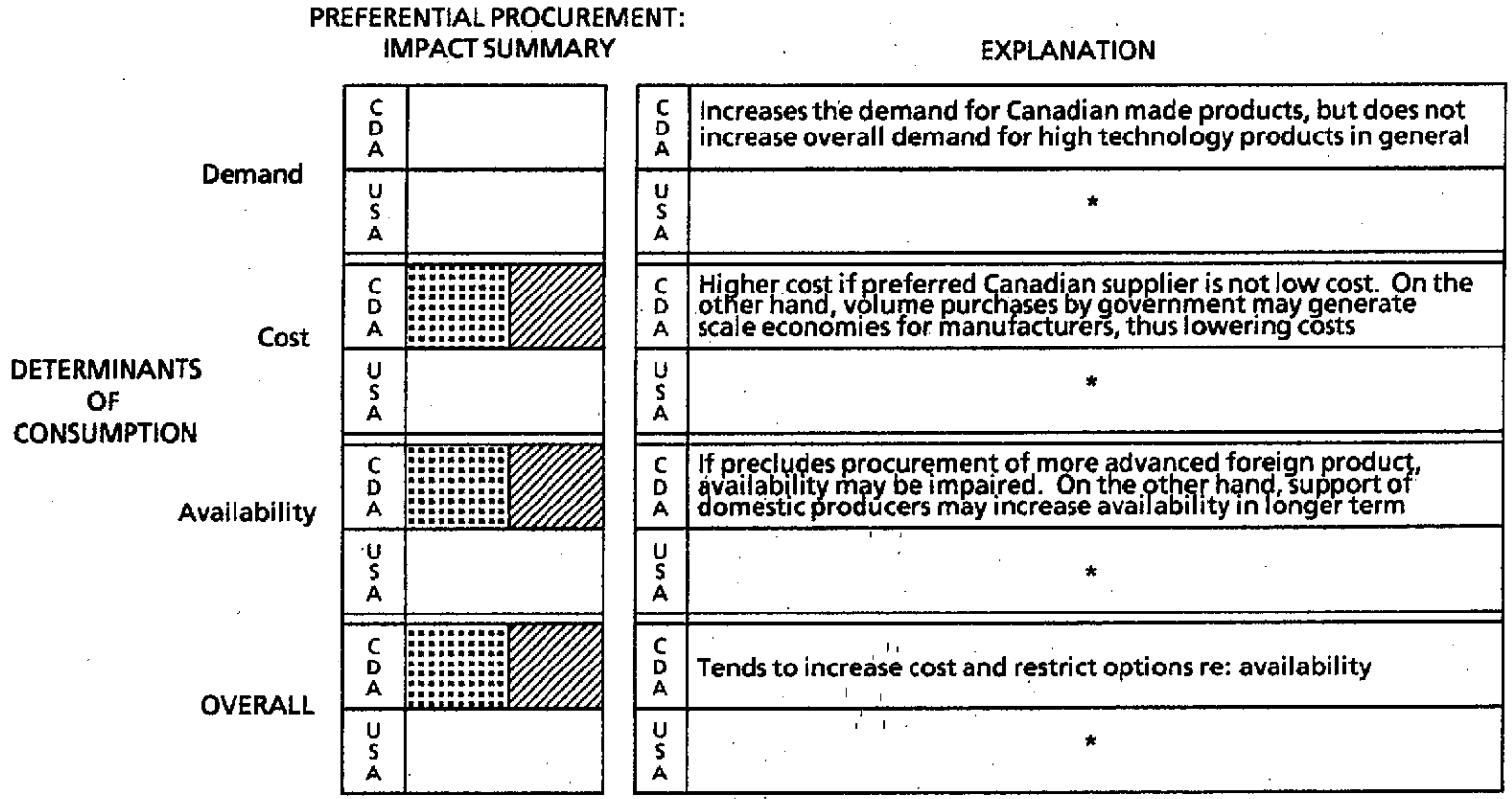
Impact Grading Scale



PREFERENTIAL PROCUREMENT CAN HAVE MIXED IMPACTS ON CONSUMPTION IN CANADA

PREFERENTIAL PROCUREMENT: TELECOM AND COMPUTER EQUIPMENT

Impact of Canadian* Preferential Procurement on Canadian Consumption

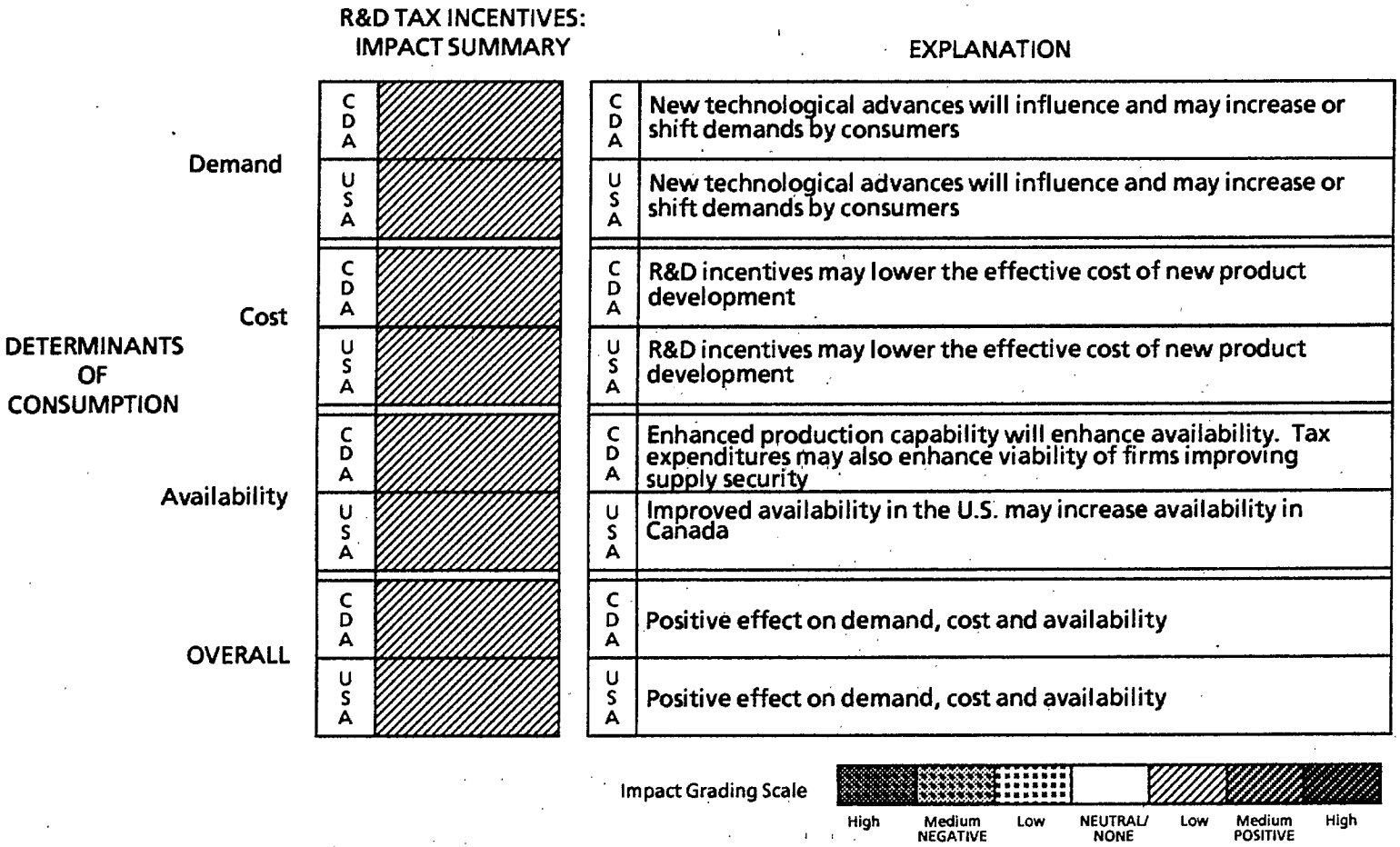


*Impact of U.S. preferential procurement on Canadian consumption is insignificant.

R&D INCENTIVES, IN BOTH CANADA AND THE U.S., HAVE MODESTLY ENCOURAGED THE CONSUMPTION OF TECHNOLOGY PRODUCTS BY CANADIANS

R&D TAX INCENTIVES: TELECOM AND COMPUTER EQUIPMENT

Impact of Canadian and U.S.R&D Tax Incentives on Canadian Consumption

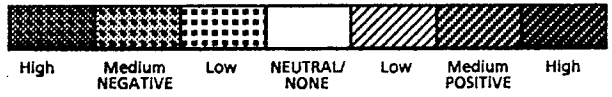


SIMILARLY, GOVERNMENT ASSISTANCE PROGRAMS ALSO PROMOTE CONSUMPTION

OTHER GOVERNMENT ASSISTANCE: TELECOM AND COMPUTER EQUIPMENT

Impact of Other Forms of Canadian and U.S.Government Assistance on Canadian Consumption

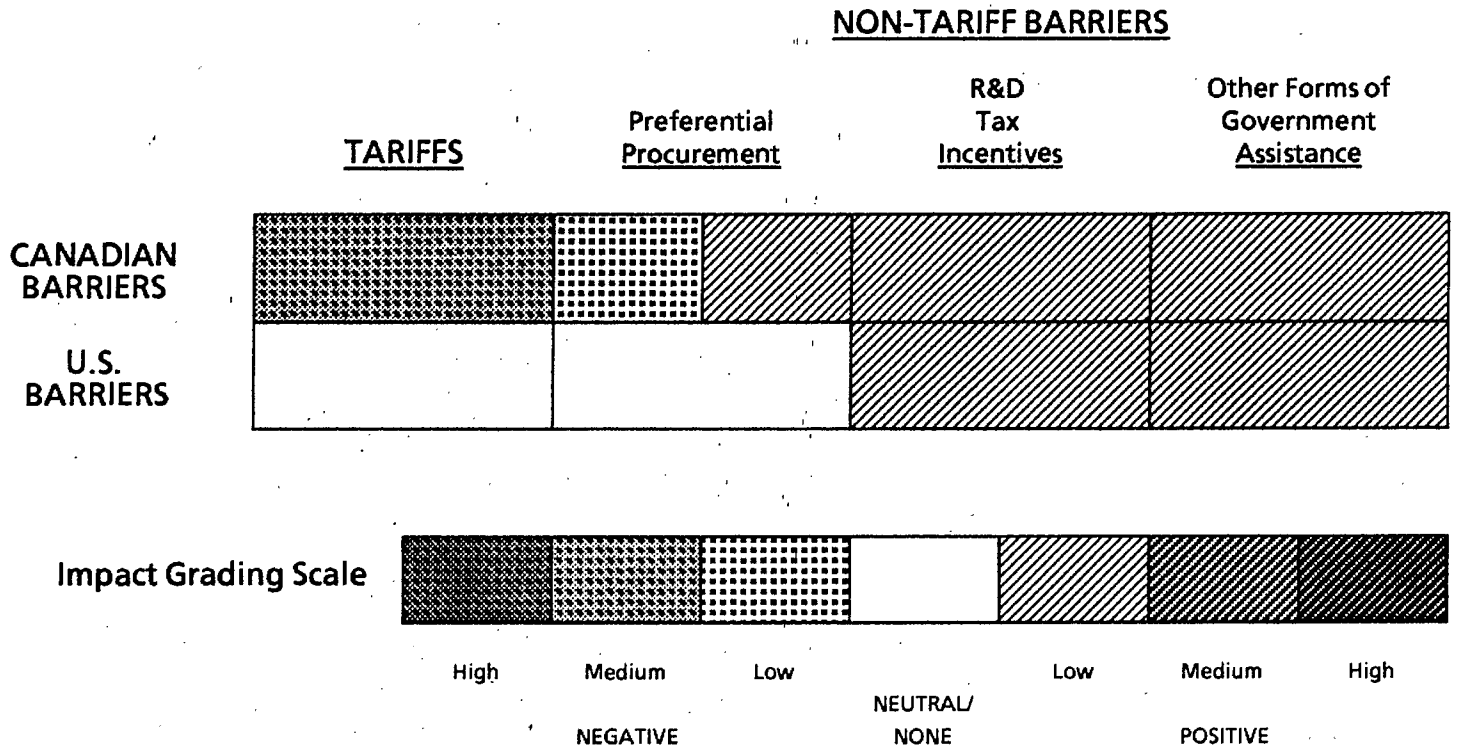
DETERMINANTS OF CONSUMPTION		OTHER GOVERNMENT ASSISTANCE: IMPACT SUMMARY	EXPLANATION
Demand	CDA		Improved access to financing will stimulate demand
	USA		No impact
Cost	CDA		Subsidized financing and various forms of advisory support assistance will tend to lower the cost of products manufactured in Canada
	USA		Assistance targeted at U.S. exporters will tend to reduce the cost of U.S. products sold in Canada
Availability	CDA		Encouraging domestic production capability will enhance availability. Tax expenditures also enhance viability of individual firms, thus improving supply security
	USA		Improved availability in U.S. may increase availability in Canada
OVERALL	CDA		Positive effect on demand, cost and availibility
	USA		Some reduction in cost and some potential for increased availability



IN SUMMARY, WHILE R&D INCENTIVES AND GOVERNMENT ASSISTANCE MAY ENCOURAGE CANADIAN CONSUMPTION, CANADIAN TARIFFS HAVE MORE SIGNIFICANT NEGATIVE IMPACTS ON CONSUMPTION

CANADIAN AND U.S. TARIFF AND NON-TARIFF BARRIERS: TELECOM AND COMPUTER EQUIPMENT

OVERALL IMPACT ON CANADIAN CONSUMPTION



III. THE IMPACT OF TRADE BARRIERS ON THE COMPETITIVENESS OF THE TELECOM AND COMPUTER EQUIPMENT INDUSTRIES IS BUFFERED

A. Trade barriers have an indirect impact on sources of competitive advantage in production of telecom and computer equipment

B. Tariffs, preferential procurement, R&D tax incentives and other forms of government assistance have a minor impact on competitive advantage in the Canadian telecom equipment industry

C. The impact of trade barriers on Canada's computer industry is also minor

D. The overall impact of major tariff and non-tariff barriers on the competitiveness of the Canadian telecom and computer equipment industries is not significant

A. TRADE BARRIERS HAVE AN INDIRECT IMPACT ON SOURCES OF COMPETITIVE ADVANTAGE IN PRODUCTION OF TELECOM AND COMPUTER EQUIPMENT

Key sources of competitive advantage in telecom and computer equipment include products and technology, marketing savvy and low cost

Trade barriers affect Canadian telecom and computer equipment production by influencing these three key sources of competitive advantage

We will assess the impact of tariff and relevant non-tariff barriers on Canadian competitiveness in these technology intensive industries

KEY SOURCES OF COMPETITIVE ADVANTAGE IN TELECOM AND COMPUTER EQUIPMENT INCLUDE PRODUCTS AND TECHNOLOGY, MARKETING SAVVY AND LOW COST

SOURCES OF COMPETITIVE ADVANTAGE

PRODUCTS AND TECHNOLOGY

- Access to technology (R&D)
- Access to educated, technology-oriented human resources - especially for products with a high engineering component
- Development and delivery of products embodying quality technology which address a need in the marketplace

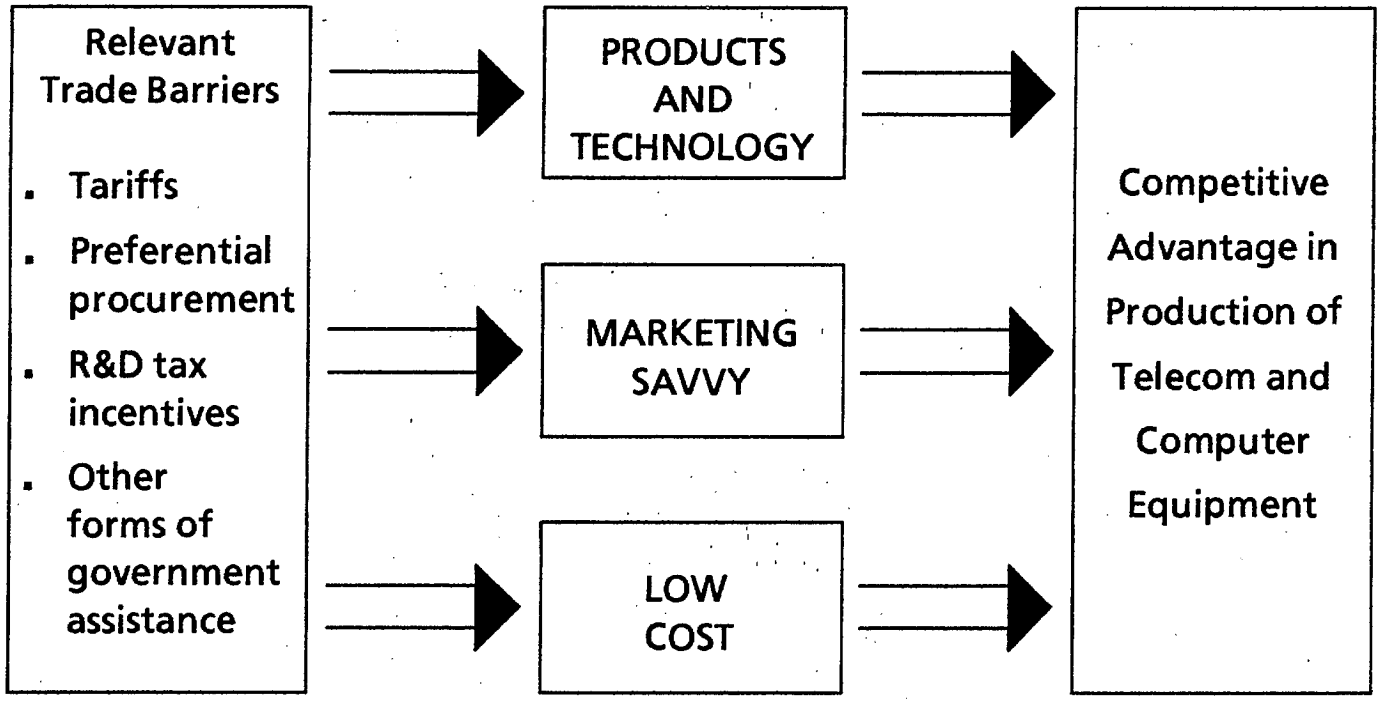
MARKETING SAVVY

- Understanding market trends and customer needs
- Building strong customer service and support networks
- And for U.S. market success, having U.S.-based manufacturing

LOW COST

- Achieving high production volumes at low unit cost
- Manufacturing in southern North America or offshore, where proximity to major markets, scale economies and other cost advantages can be best captured

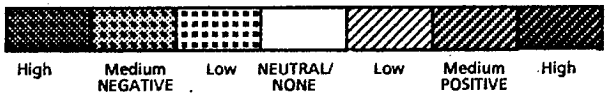
TRADE BARRIERS AFFECT CANADIAN TELECOM AND COMPUTER EQUIPMENT PRODUCTION BY INFLUENCING THESE THREE KEY SOURCES OF COMPETITIVE ADVANTAGE



WE WILL ASSESS THE IMPACT OF TARIFF AND RELEVANT NON-TARIFF BARRIERS ON CANADIAN COMPETITIVENESS IN THESE TECHNOLOGY INTENSIVE INDUSTRIES

IMPACT OF CANADIAN AND U.S. TRADE BARRIERS ON CANADIAN COMPETITIVENESS

SOURCES OF COMPETITIVE ADVANTAGE			IMPACT SUMMARY	EXPLANATION
	Products and Technology	CDA		
		USA		
	Marketing Savvy	CDA		
		USA		
	Low Cost	CDA		
		USA		
	OVERALL	CDA		
		USA		



B. TARIFFS, PREFERENTIAL PROCUREMENT, R&D TAX INCENTIVES AND OTHER FORMS OF GOVERNMENT ASSISTANCE HAVE A MINOR IMPACT ON COMPETITIVE ADVANTAGE IN THE CANADIAN TELECOM INDUSTRY

Tariffs are generally perceived as irritants by high technology industries

Procurement strategy can have a major impact on the telecom equipment industry, but Canada has not fully capitalized on this opportunity

Canadian R&D incentives benefit the telecom equipment industry, but U.S. incentives reduce the competitive significance of this benefit

Other government assistance programs in the U.S. and Canada influence both the location and the financial stability of high tech manufacturers

TARIFFS ARE GENERALLY PERCEIVED AS IRRITANTS BY HIGH TECHNOLOGY INDUSTRIES

TARIFFS: TELECOM EQUIPMENT

Impact of Canadian and U.S. Tariffs on Canadian Competitiveness

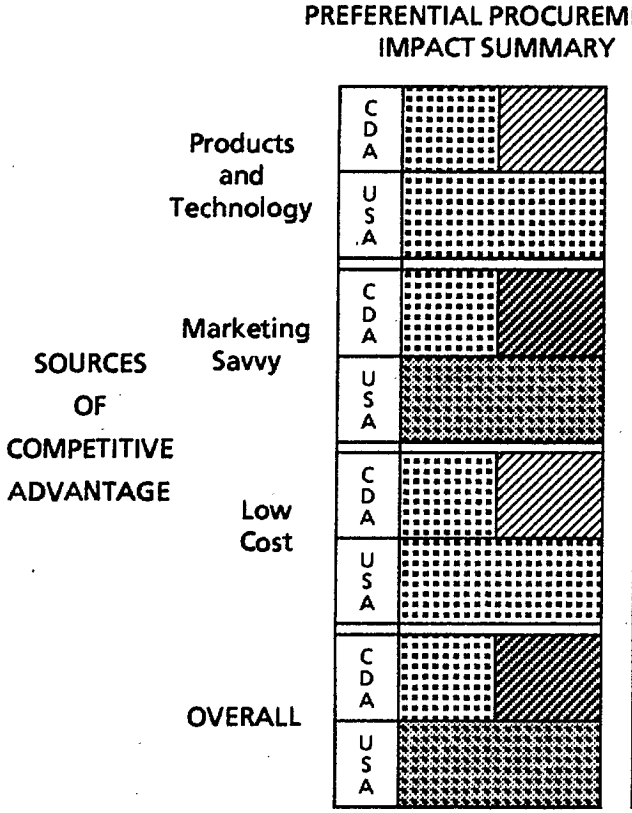
SOURCES OF COMPETITIVE ADVANTAGE			TARIFFS: IMPACT SUMMARY	EXPLANATION
	Products and Technology	CDA		No impact
		USA		No impact
	Marketing Savvy	CDA		No impact
		USA		No impact
	Low Cost	CDA		Confer small cost advantages on domestic manufacturers, but other cost disadvantages in Canada usually outweigh tariff benefits
		USA		Reduce cost advantage that Canadian manufacturers might otherwise enjoy when selling into U.S. market
	OVERALL	CDA		Increase cost of doing business in Canada. Are irritants and not determinants of strategy
		USA		Act the same way as Canadian tariffs

Impact Grading Scale

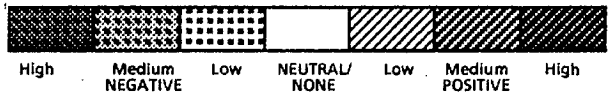
PROCUREMENT STRATEGY CAN HAVE A MAJOR IMPACT ON THE TELECOM EQUIPMENT INDUSTRY, BUT CANADA HAS NOT FULLY CAPITALIZED ON THIS OPPORTUNITY

PREFERENTIAL PROCUREMENT: TELECOM EQUIPMENT

Impact of Canadian and U.S. Preferential Procurement on Canadian Competitiveness



		EXPLANATION
Products and Technology	CDA	Mixed results: Some "world product mandate" plants for Canada. However, some sub-optimal technology transfer
	USA	Canadian companies without U.S. manufacturing base have a disadvantage in gaining access to U.S. space and defense program contracts
Marketing Savvy	CDA	Bell Canada affiliation has helped Northern Telecom. Smaller companies allege that unsystematic procurement preferences in Canada hurt marketing efforts abroad
	USA	AT&T Technologies has residual links to regional Bell operating companies. National security considerations restrict market access in U.S.A.
Low Cost	CDA	Foreign firms may build inefficient domestic assembly plants. However, large government contracts can provide critical mass of volume for smaller companies
	USA	Higher production volumes generate lower unit costs. Restricted access to government purchases in U.S.A. increases costs for unsuccessful Canadian bidders
OVERALL	CDA	In Canada, government accounts for a major share of high tech purchases, especially for small and growth companies
	USA	Real impact mitigated because government share of market in U.S. smaller than in Canada and because many Canadian companies already manufacture in U.S.



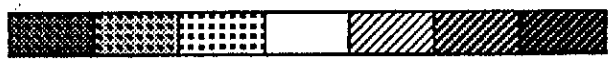
CANADIAN R&D INCENTIVES BENEFIT THE TELECOM EQUIPMENT INDUSTRY, BUT U.S. INCENTIVES REDUCE THE COMPETITIVE SIGNIFICANCE OF THIS BENEFIT

R&D TAX INCENTIVES: TELECOM EQUIPMENT

Impact of Canadian and U.S. R&D Tax Incentives on Canadian Competitiveness

SOURCES OF COMPETITIVE ADVANTAGE			R&D TAX INCENTIVES: IMPACT SUMMARY	EXPLANATION
	Products and Technology	CDA		Promote Canadian based R&D and manufacturing. Encourage growth of domestic human resource talent base. Incentives also available to U.S. companies based in Canada
		USA		Are less attractive than corresponding Canadian incentives. Also available to Canadian companies based in U.S.A.
	Marketing Savvy	CDA		No impact
		USA		No impact
	Low Cost	CDA		Subsidize product development efforts, thus lowering cost of Canadian manufactured products
		USA		Lower the costs of U.S. manufacturers
	OVERALL	CDA		Benefit all profitable companies paying Canadian taxes and which engage in R&D in Canada
		USA		Mitigate any product, technology or cost advantages enjoyed by Canadian companies exporting to the U.S.

Impact Grading Scale

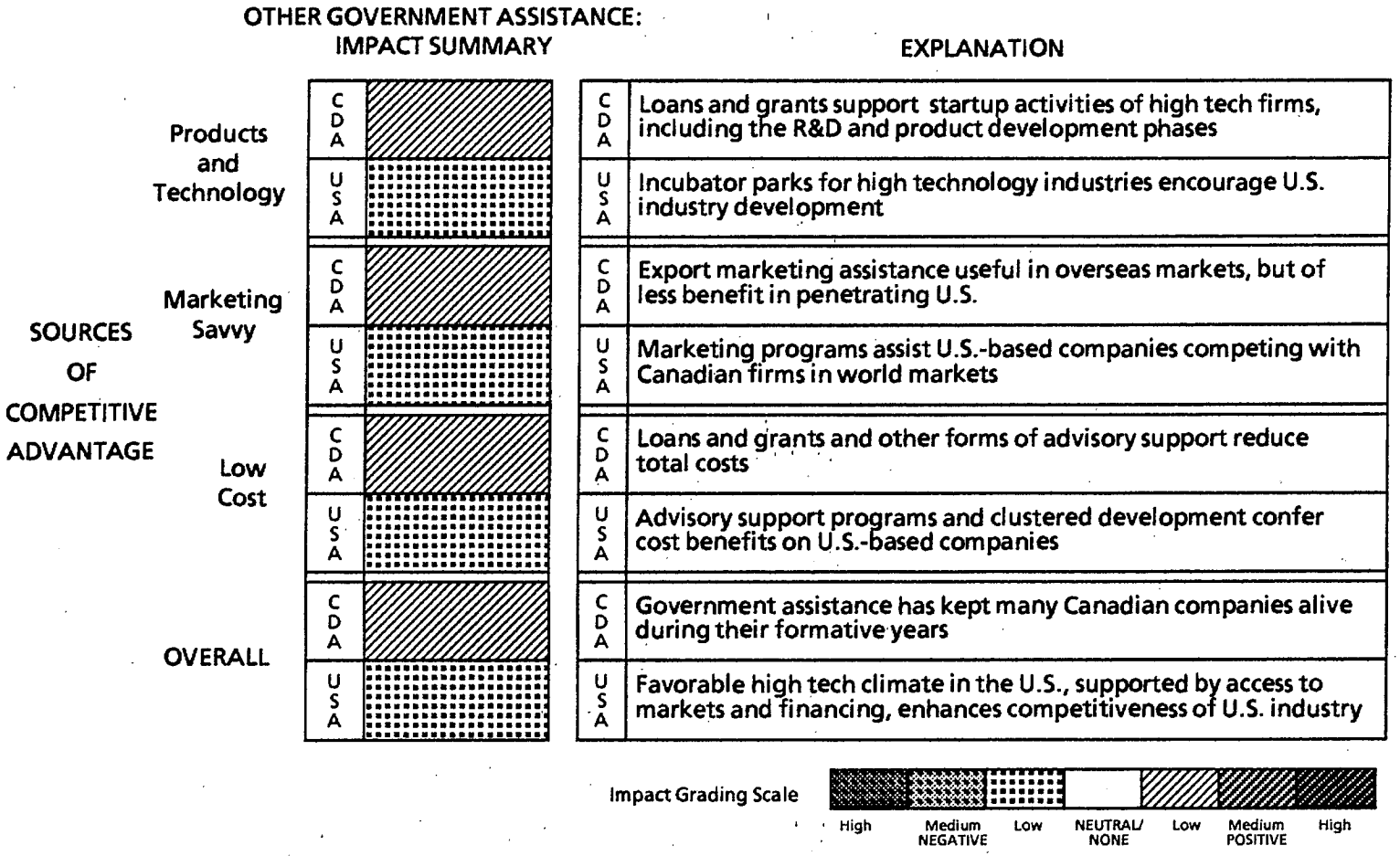


High | Medium NEGATIVE | Low | NEUTRAL/ NONE | Low | Medium POSITIVE | High

OTHER GOVERNMENT ASSISTANCE PROGRAMS IN THE U.S. AND CANADA INFLUENCE BOTH THE LOCATION AND THE FINANCIAL STABILITY OF HIGH TECH MANUFACTURERS

OTHER GOVERNMENT ASSISTANCE: TELECOM EQUIPMENT

Impact of Other Forms of Canadian and U.S. Government Assistance on Canadian Competitiveness



C. THE IMPACT OF TRADE BARRIERS ON CANADA'S COMPUTER INDUSTRY IS ALSO MINOR

Computer equipment tariffs are lower than for telecom equipment, so that while their nuisance effect remains a concern, their cost implications are less significant

The role of preferential procurement in Canada's computer equipment industry is very much like that facing telecom equipment

Convergence of technology in telecom and computers has caused R&D tax incentives to have like effects on competitiveness in both these industries

Similarly, other forms of government assistance in both Canada and the U.S. have also assisted and encouraged the computer equipment industry

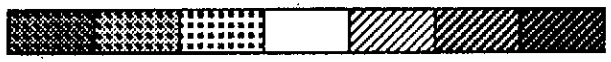
COMPUTER EQUIPMENT TARIFFS ARE LOWER THAN FOR TELECOM EQUIPMENT, SO THAT WHILE THEIR NUISANCE EFFECT REMAINS A CONCERN, THEIR COST IMPLICATIONS ARE LESS SIGNIFICANT

TARIFFS: COMPUTER EQUIPMENT

Impact of Canadian and U.S. Tariffs on Canadian Competitiveness

SOURCES OF COMPETITIVE ADVANTAGE			TARIFFS: IMPACT SUMMARY	EXPLANATION
	Products and Technology	CDA		No impact
		USA		No impact
	Marketing Savvy	CDA		No impact
		USA		No impact
	Low Cost	CDA		Confer small cost advantage on domestic manufacturers, but other cost disadvantages in Canada usually outweigh tariff benefit
		USA		Offset or exceed differential cost advantage that Canadian manufacturers might otherwise enjoy when selling into U.S. market. U.S. tariffs are higher than those in Canada
	OVERALL	CDA		Increase cost of doing business in Canada. Are irritants and not determinants of strategy
		USA		Act the same way as Canadian tariffs

Impact Grading Scale

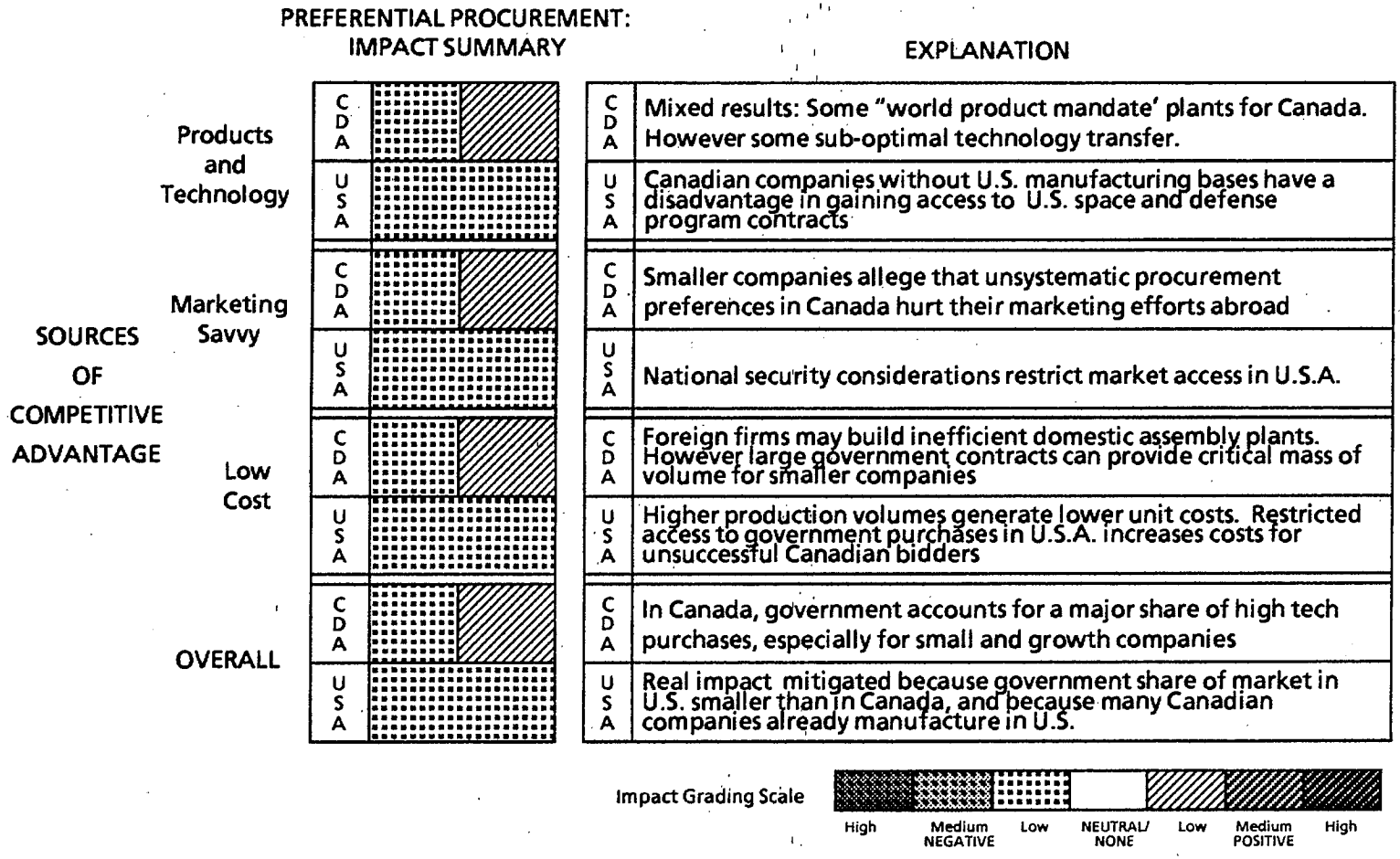


High | Medium NEGATIVE | Low | NEUTRAL/ NONE | Low | Medium POSITIVE | High

THE ROLE OF PREFERENTIAL PROCUREMENT IN CANADA'S COMPUTER EQUIPMENT INDUSTRY IS VERY MUCH LIKE THAT FACING TELECOM EQUIPMENT

PREFERENTIAL PROCUREMENT: COMPUTER EQUIPMENT

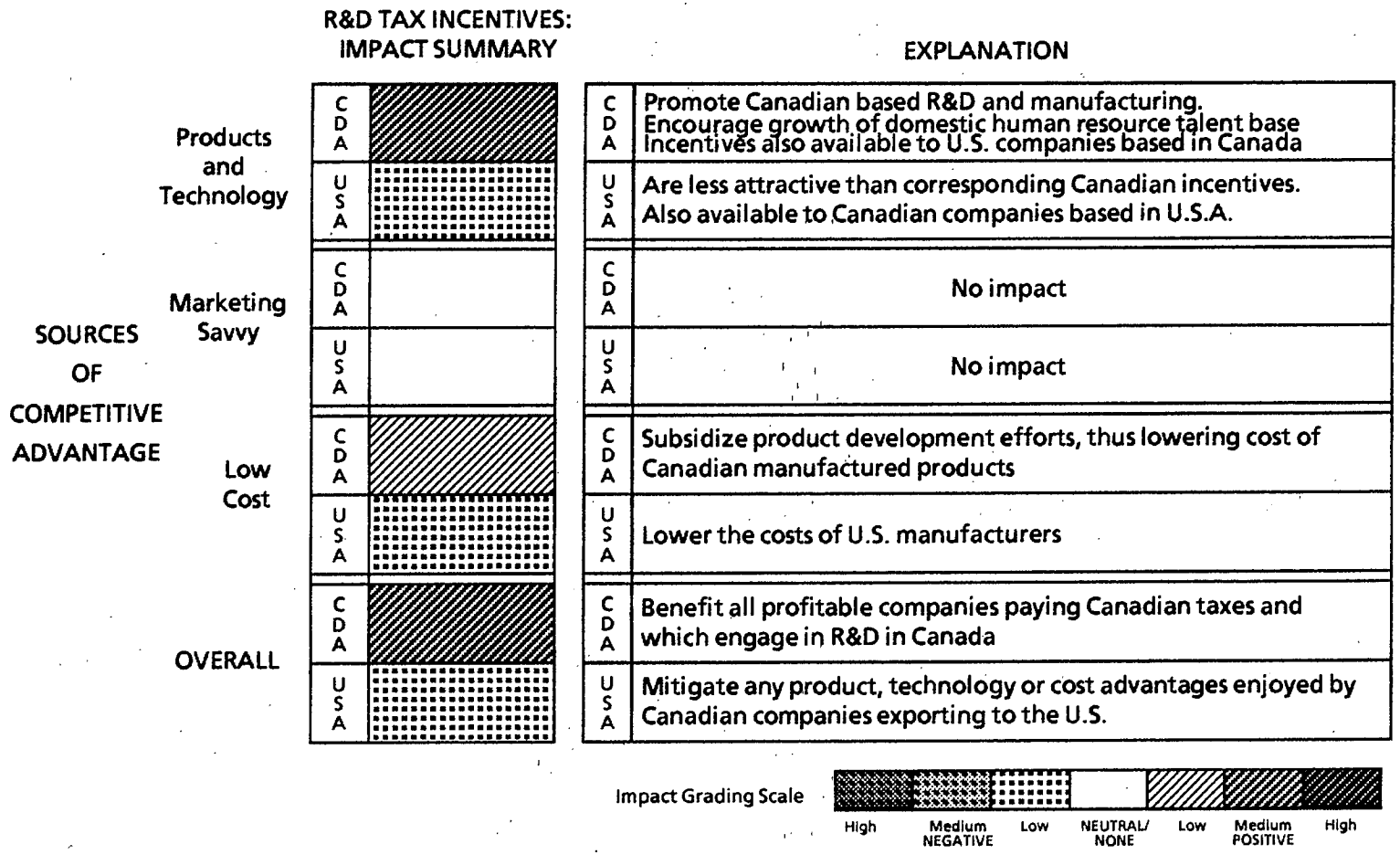
Impact of Canadian and U.S. Preferential Procurement on Canadian Competitiveness



CONVERGENCE OF TECHNOLOGY IN TELECOM AND COMPUTERS HAS CAUSED R&D TAX INCENTIVES TO HAVE LIKE EFFECTS ON COMPETITIVENESS IN BOTH THESE INDUSTRIES

R&D TAX INCENTIVES: COMPUTER EQUIPMENT

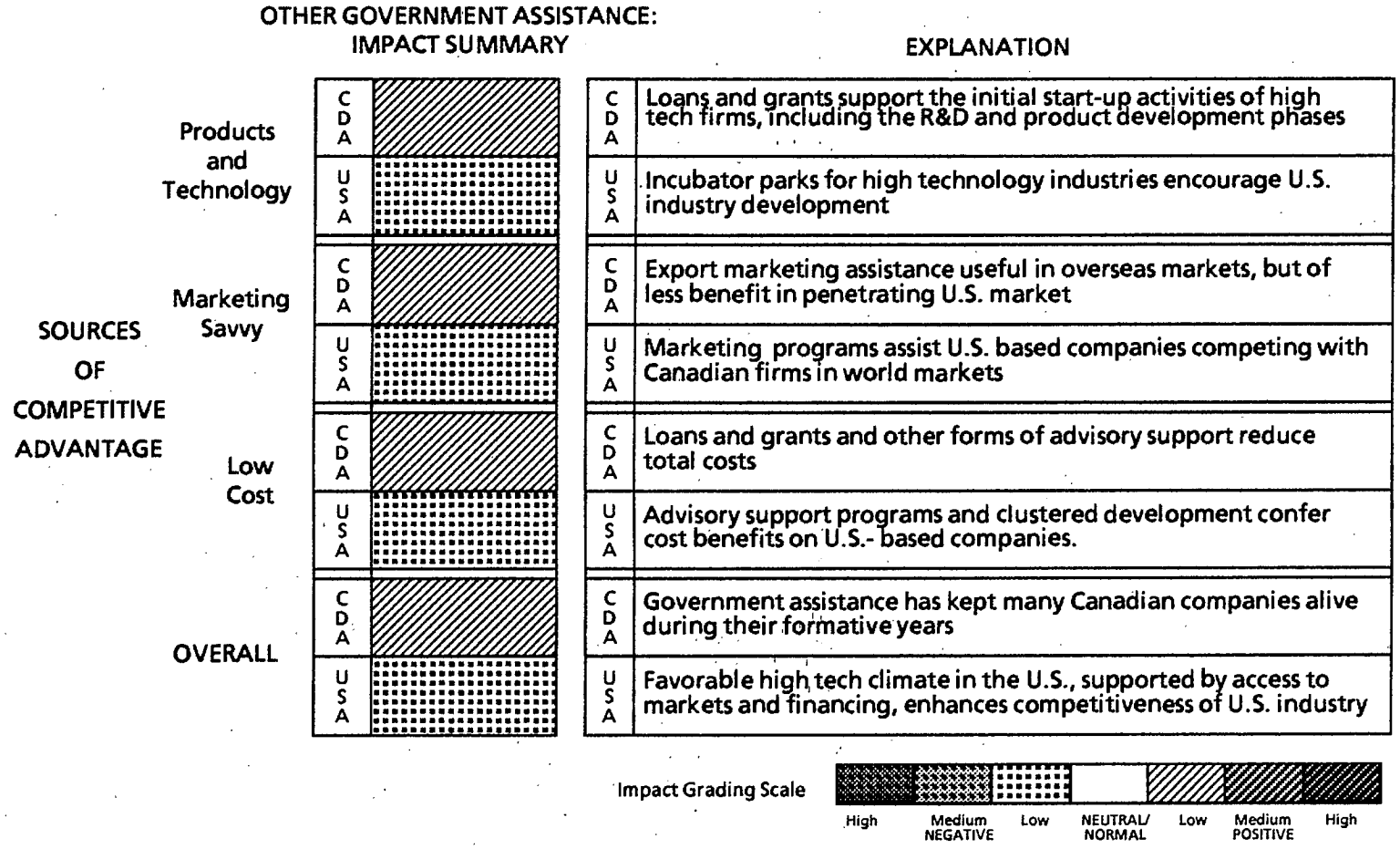
Impact of Canadian and U.S. R&D Tax Incentives on Canadian Competitiveness



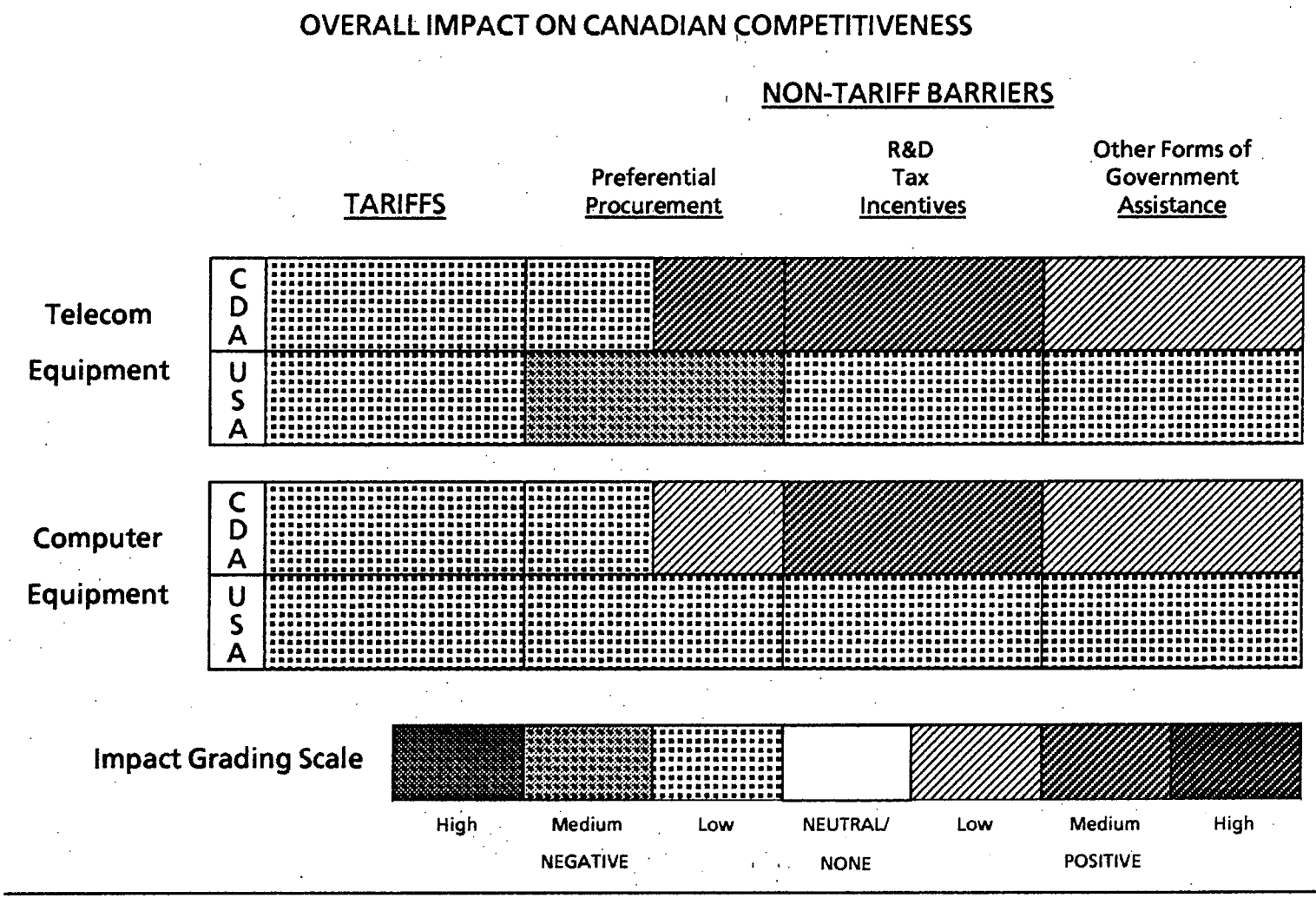
SIMILARLY, OTHER FORMS OF GOVERNMENT ASSISTANCE IN BOTH CANADA AND THE U.S. HAVE ALSO ASSISTED AND ENCOURAGED THE COMPUTER EQUIPMENT INDUSTRY

OTHER GOVERNMENT ASSISTANCE: COMPUTER EQUIPMENT

Impact of Other Forms of Canadian and U.S. Government Assistance on Canadian Competitiveness



D. THE OVERALL IMPACT OF MAJOR TARIFF AND NON-TARIFF BARRIERS ON THE COMPETITIVENESS OF THE CANADIAN TELECOM AND COMPUTER INDUSTRIES IS NOT SIGNIFICANT



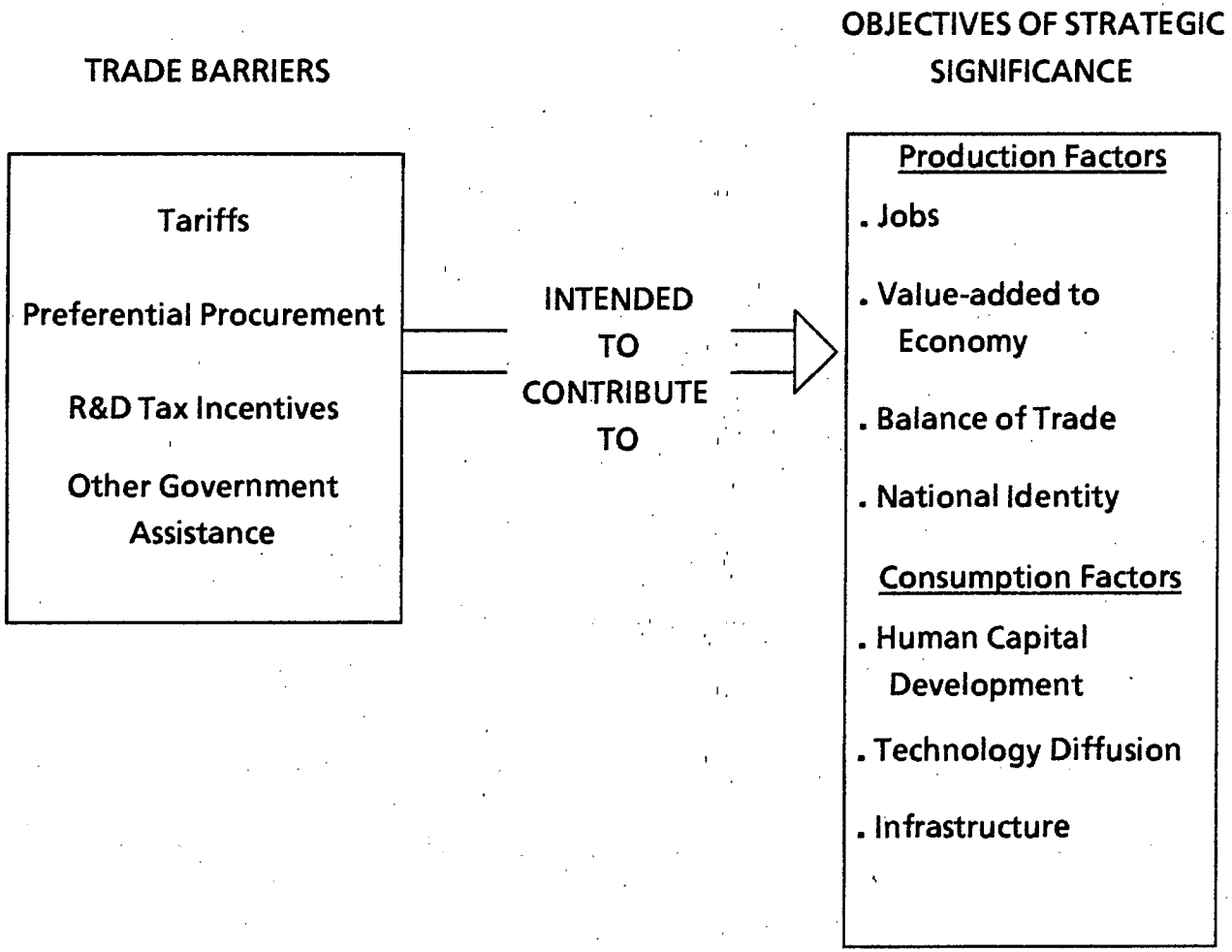
IV. BILATERAL REMOVAL OF TELECOM AND COMPUTER EQUIPMENT TRADE BARRIERS WOULD HAVE A MIXED IMPACT ON CANADIAN PRODUCTION BUT A POSITIVE IMPACT ON CANADIAN CONSUMPTION

Trade barriers are intended to contribute to a number of objectives of strategic significance

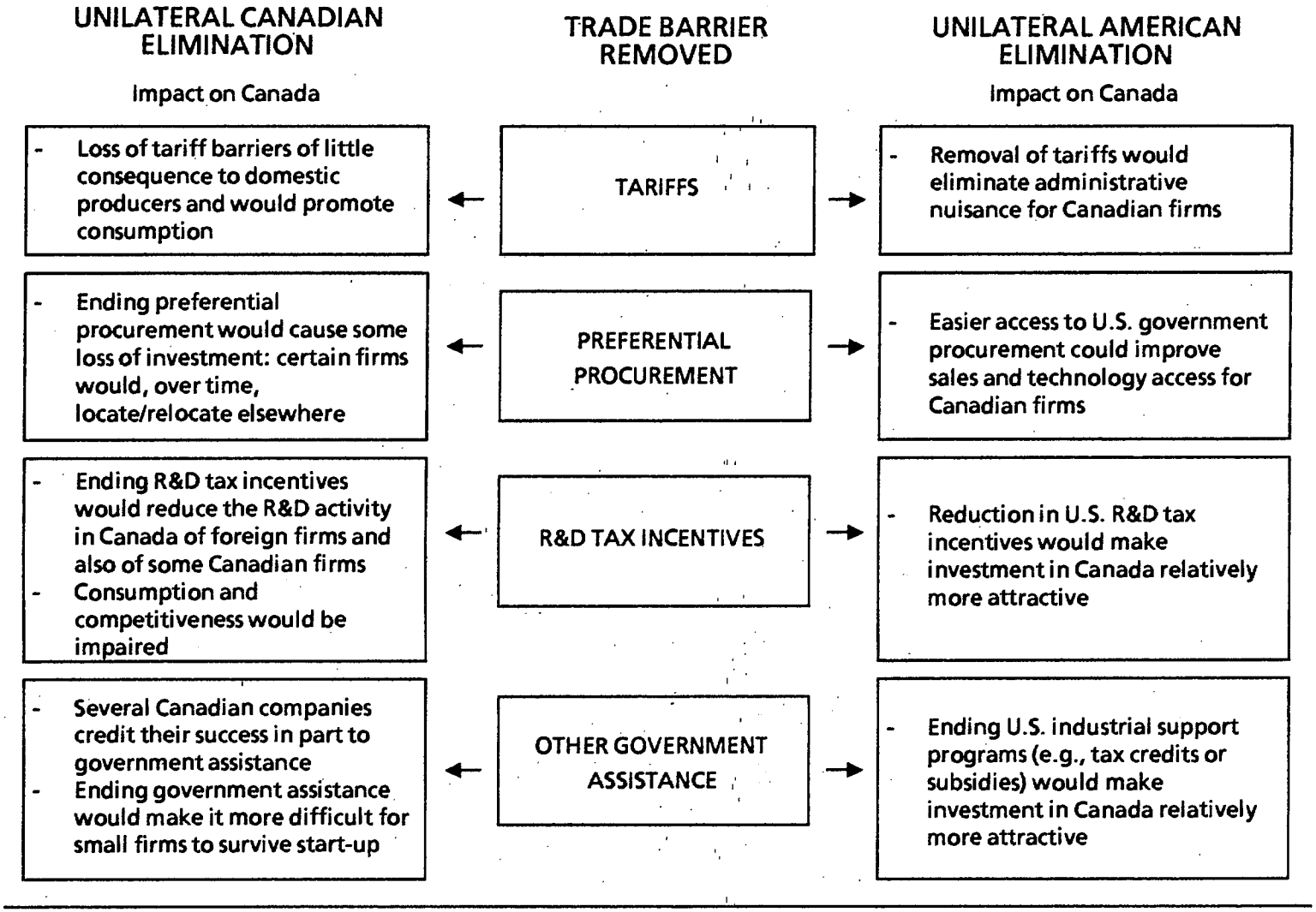
Unilateral elimination of the trade barriers by either Canada or the U.S. would have quite different impacts on the Canadian telecom and computer equipment sector

Bilateral freer trade between the U.S and Canada in the telecom and computer equipment sectors would most likely be of net benefit to Canada

TRADE BARRIERS ARE INTENDED TO CONTRIBUTE TO A NUMBER OF OBJECTIVES OF STRATEGIC SIGNIFICANCE



UNILATERAL ELIMINATION OF THE TRADE BARRIERS BY EITHER CANADA OR THE U.S. WOULD HAVE QUITE DIFFERENT IMPACTS ON THE CANADIAN TELECOM AND COMPUTER EQUIPMENT SECTOR



BILATERAL FREER TRADE BETWEEN THE U.S. AND CANADA IN THE TELECOM AND COMPUTER EQUIPMENT SECTORS WOULD MOST LIKELY BE OF NET BENEFIT TO CANADA