

of Canada decision, a firm in Manitoba that wished to acquire a PBX had to do so from the government-owned Manitoba Telephone System. The purchaser did not have the option of buying directly from an equipment manufacturer, which would have left European telecommunications equipment firms out in the cold. Only time will tell if and how reciprocity is applied and how Canadian regulatory authorities, provincial as well as federal, will respond.

g) Conclusion

Europe 1992 has achieved a wide degree of agreement among EC Members States that the balkanization of telecommunications markets must end. But there is much less agreement on the details, particularly the effective powers that national telecommunications administration (TAs) will retain. Among outside observers there is scepticism about how much "deregulation" and "liberalization" will, in fact, be achieved by 1992. There is also some doubt (particularly but not only because of the local content rules) whether Europe 1992 will indeed open markets to extra-EC firms without a European presence. In the view of some observers, Europe 1992 might have the effect of discriminating in favour of intra-EC trade, thereby doing more to dampen extra-EC trade in telecommunications and computers than it does to stimulate it. Whether or not this "Fortress Europe" concept is tenable is still widely debated.

2.2 Effects on the EC: Ongoing Restructuring

How will the changes that Europe 1992 is designed to effect influence the various subsectors of the telecommunications and computer sector? Table 12 provides a qualitative answer to this question. Overall, the proposed changes will have their most profound effects on the telecommunications equipment sector. Of particular importance will be the

harmonization of standards and certification procedures and the opening up of government procurement. To date, these have conjoined to limit intra-EC trade to less than 10 per cent of total demand.

The fact of largely closed markets in telecommunications equipment is attributable to three factors: (1) selective procurement policies employed by national governments as part of an industrial policy aimed at building up the country's technology base; (2) restrictive certification policies and incompatible national standards that reflect the different specific technology orientations of the public administrations responsible for providing telecommunication services; (3) "buyer or input specificity" in which the good or service supplied is customized to the user's specification, again a reflection of differences in national telecommunication technologies particularly for central office equipment.

The balkanization of telecommunications markets has prevented most firms from attaining full economies of scale. This is particularly so in central office (CO) equipment production and somewhat less so in the production of transmission equipment. It is estimated that a firm operating at one-half of minimum efficient scale incurs production and development costs 5 to 15 per cent higher than those incurred by an efficiently scaled firm.⁸ Economies of scale are least important in the production of customer premise equipment (CPE).

Europe 1992 would allow leading equipment suppliers to reduce costs via greater specialization in the production of CO and transmission equipment and permit some of the smaller players in these markets to gain via longer production runs. For small- and medium-sized Canadian telecommunications equipment firms, the best opportunities are therefore likely to be in specialized CPE