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L'étude réalisée porte sur l'analyse du potentiel d'amélioration des exportations canadiennes et des investissements directs canadiens à l'étranger. Pour effectuer cette analyse, nous avons constitué un ensemble exclusif de données administratives regroupant des informations détaillées au sujet de millions d'entreprises ayant exercé leurs activités au Canada entre 2010 et 2015. Ainsi avons-nous pu, dans un premier temps, étudier la population canadienne actuelle d'exportateurs et d'investisseurs directs à l'étranger. À l'aide d'un modèle probit et de l'appariement des coef Pcients de propension, nous en avons déduit, dans un sec-

and Feng 2014; Dutt, Mihov, and Zandt 2013; Tapp, Van Assche, and Wolfe 2017; Timothy and Kim 2013).

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Expanding Canada's exporter community and supporting the economic recovery, therefore, requires

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Þxed costs and sunk costs." Baldwin and Yan (2020)Þnd that a Þrm's export decision and subsequent performance is related to its prior global engagement as an importer.

To identify key observable Prm characteristics typically associated with Prms' exporting or foreign investment decisions, we model a Prm's probability of being an exporter or foreign direct investor as a function of a set of observable characteristics, as follows:

$$Prob(d) = \Phi(Z), \tag{1}$$

where d is an indicator variable that equals 1 if the Prm is an exporter or a foreign direct investor and 0 otherwise. Z is a set of observable Prm characteristics, which includes labour productivity, size (sales or total assets), age, research and development, capital intensity, Pnancial structure (leverage), industry, province and international activities (exporting, importing, CDIA, foreign ownership in Canada, and proportion of immigrant workers employed by the Prm). Industry, province, and foreign ownership in Canada are discrete dummy variables. All other variables are continuous.

Potential Exporters and Outward Canadian Foreign Direct Investors

The key challenge is that potential exporters or Canadian foreign direct investors abroad are not directly observable. However, they can be inferred using propensity score matching.⁴ This approach essentially creates a control group (i.e., potential exporters or foreign direct investors) from the non-treated pool (i.e., the universe of non-exporters or non-foreign direct investors), in which the distribution of observed P rm characteristics is as similar as possible to the distribution of the treated group (i.e., currently active exporters or foreign direct investors).

Two steps are involved. First, we identify the key observable Prm characteristics typically associated with Prms' exporting and foreign investment decisions. A probit model based on Equation (1) distills the numerous observable characteristics into an estimated propensity score (i.e., the probability that a given Prm in Canada, operating in industry i, at time t, is an exporter or foreign direct investor), conditional on a detailed set of observable characteristics Z.

In the second step, we use the estimated propensity scores to match each current exporter or foreign direct investor with one or more similar Prms, whose propensity scores and observable characteristics are not statistically signiPcantly different. The matched Prms are the potential pool of exporters and investors who share the same characteristics as the current ones but who have not yet become internationally active.⁵

as size and age are dehed as follows. There are three groups by age: 0–10 years, 11–20 years, and 21 or more years of operations. There are also three size groups: small Prms (with fewer than 100 employees), medium-sized Prms (with more than 100 but less than 500 employees), and large Prms (with more than 500 employees).

This study focuses on active commercial businesses operating in Canada. The commercial business sector here includes 21 NAICS two-digit industries but excludes the following sectors that are generally much less engaged internationally: utilities (NAICS 22), education (NAICS 61), health care and social assistance (NAICS 62), and other services such as professional services (NAICS 813) and public administration (NAICS 91). Businesses with no employment or revenues are excluded. In our sample, there are on average 2.4 million enterprises in Canada each year, but only 0.7 million are considered active Canadian commercial businesses in this study.

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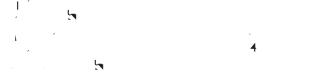
Current Exporters and Foreign Direct Investors

Canadian Prms serve foreign markets by exporting directly from Canada and by selling from foreign af liates operating abroad. It is not widely appreciated that total sales from these two channels are similar in magnitude (Table 2). Between 2010 and 2015, the annual value of exports was \$570 billion, whereas annual foreign af liate sales were \$541 billion. Moreover, foreign af liate sales grew faster than exports (8.5 percent per year vs. 6.1 percent). Therefore, Canada's exports are increasingly being complemented by a growing, on-the-ground, value-creating presence of Canadian companies operating in foreign markets.

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