

If classical theory focuses on differences in characteristics between locations, and new trade theory focuses on the characteristics of individual industries, then the more recent heterogeneous firm theory (often called new new trade theory) focuses on the differences between individual firms. New new trade theory recognizes that within a given industry and in a given location, significant variation can exist between firms. Although many firms do not engage in international trade, those that do so tend to be more productive. Firms that both trade and invest abroad tend to be the most productive.

According to new new trade theory, engaging in international trade enables the best firms to expand and replace weaker firms, resulting in increased productivity, higher wages and improved standards of living. Under both classical and new trade theory, most of the gains from trade occur as a result of the movement of resources between industries,<sup>5</sup> whereas new new trade theory suggests that most benefits arise from differences within industries, i.e. between firms. According to new new trade theory, trade takes place because of the differences between individual firms which can possess a technology or intellectual property (IP) that makes them better able to compete internationally. This produces a second source of benefit from trade because when individual firms expand, they can spread their fixed costs of innovation across a larger customer base, thereby increasing the incentive to innovate. Such a dynamic benefit that accumulates over time, much like compound interest, can potentially be an important gain from trade.

The idea of global value chains builds on this evolution of the understanding of why and how trade occurs and the resulting impacts. As recognized by new new trade theory, even within a country or industry, firms can operate very differently. One of those differences may be how firms integrate into global value chains; if firms produce their own intermediate inputs or if they source them from outside the firm, if their human resource or accounting departments are next door to their production facilities or are located half way around the world. GVCs may therefore explain some of the observed productivity differences between firms as identified under the new new trade theory. But, potentially more importantly, GVCs can be treated like a technology employed by the firm to become more competitive. GVCs help to look into the black box that is the firm and understand how they operate and why.

Several models of GVCs have been developed, each aimed at providing a theoretical framework to predict the behaviour of firms engaged in global trade.<sup>6</sup> Feenstra and Hanson (1996, 1997) begin with a Heckscher-Ohlin framework but divide the production process for any particular final good or service into activities. These activities are then allocated to the location where they are most efficiently performed. Grossman and Rossi-Hansberg (2008) provide a similar model for trade but focus on tasks instead of activities. The difference between *activities* and *tasks* is primarily an issue of aggregation. For example, an activity such as legal services may be separated into distinct tasks, such as the provision of high-value legal advice or the execution of

5 In these models, gains from trade can result from reduced costs arising from economies of scale, from more efficient use of resources, from reducing distortions as one moves closer to perfect competition and from increased product variety.

6 Notwithstanding that within the economics canon, the term "global value chains" is rarely used, *offshoring*, *outsourcing*, *trade in tasks* etc. are considered for the present purposes to fall within the rubric of GVCs.