# FINANCIAL INTERMEDIATION UNDER THE NEW TRADE PARADIGM: EDC AND INTEGRATIVE TRADE


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**The world has not stood still since this paper was originally prepared in January 2007, when the author was Senior Vice-President, Corporate Affairs, and Chief Economist of EDC. Canadian companies have made great strides in adapting to the reality of globalization, and EDC has deepened its understanding of the situation faced by Canadian companies, thanks both to day-to-day interactions with them and to direct commentary on this paper from interested readers. Special thanks are due to Elliot Lifson for his ongoing interest and support. The author is now President and CEO of EDC; the views expressed here are those of the author, and not necessarily of Export Development Canada.*

***Introduction***

The world is going global and a new trade paradigm is emerging. The competitiveness equation for a typical Canadian company has moved from one of local efficiency and productivity to one that also encompasses foreign suppliers, logistics providers and financial intermediaries.

The purpose of this paper is to identify this paradigm shift and trace its dynamic, and to draw from that the implications for international financial intermediation. The discussion then turns to how EDC is evolving to adapt to this new world of international trade.

***The World is Flat***

In his book entitled “The World Is Flat”, Thomas Friedman[1] describes how Christopher Columbus set out westbound from Europe over 500 years ago to find India. His hypothesis was that the world was round, so one could reach India by heading west by sea as well as by heading east, overland. He discovered America instead of India, and learned that the world was much bigger than he had imagined.

Today, relates Friedman, one flies from America to India and rediscovers America – thousands of Americans and Indians working with each other, for global companies in American-style office towers, fully coordinated in both America and India in real time. Since geographic distance means so little today, Friedman argues that the world has become flat once again.

How did the world become so flat? Friedman argues that the world was flattened by such events as the fall of the Berlin Wall, the invention of software that allowed computers to talk to one another, the development of work-flow software that permitted tasks to be divided in time and geography, and the laying of thousands of miles of fibre-optic cable to connect the world together. With this infrastructure in place, companies were able to undertake the various forms of outsourcing, offshoring and insourcing that today are taken for granted by both globalized companies and small, global-tapping companies alike.

Friedman argues convincingly that the forces that have been unleashed are far from being exhausted. Some companies, like Wal-Mart and Hewlett-Packard are at the forefront, and practice it like an art form. Others are finding that they are unable to compete in the global marketplace because they have not yet taken full advantage of this flatter world. This convergence process where all companies become participants in the flatter world will continue for some time. Companies will need to adapt or perish.

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*[1] Friedman, Thomas, The World is Flat: A Brief History of the Twenty-first Century, New York: Farrar, Straus and Giroux, 2005.*

***Economic Forces and Enablers***

Friedman's array of forces might better be described as enablers, for the true forces that are operating are even more fundamental. Indeed, our understanding of those forces is as old as the discipline of economics itself.

Economics is all about the process of specialization, which is the fundamental force that underlies Jared Diamond's description of economic history, entitled, "Guns, Germs, and Steel". [2] In the beginning, man spent all his waking hours foraging to feed himself and his immediate family. At some point, the discovery of fertile land and the idea of cultivation came together, and man began to see the advantages of staying in one place. He cultivated crops and kept domestic animals, developing immunities to diseases (germs). From there, societal progress is all about specialization, as economic actors took on increasingly narrow roles in society and engaged in trade or commerce between themselves in order to satisfy their full array of needs. It is specialization combined with trade that generated a societal surplus, which in turn permitted societies to fund government, research (steel), religion, a military (guns), and so on – the key ingredients that supported Europeans' ability eventually to dominate the less developed world.

The propensity to specialize in economic activity is just as powerful today as it was 50,000 years ago. It is how people become more productive, and how companies become more profitable. Well-known illustrations are Adam Smith's pin factory and Henry Ford's assembly line. Specialization is also how economies or countries become successful. All of the important trends in the world economy today can be seen in this light, and the various roadblocks to progress can almost always be seen as impediments to increased specialization in economic activity. What this means is that the process of globalization is akin to a force of nature.

Accordingly, many of the phenomena that Friedman analyzes in his book amount to enablers that permit increased specialization. The technological breakthroughs that have made the world flat have also made it possible for firms to break up their products and processes into even smaller, more specialized slices. These slices can then be performed wherever the match between worker skill sets, productivity and wage rates is optimal. In particular, processes that require low skills can be performed by abundant, low-cost labour, even though they may be situated far away from head office, because of the enablers Friedman has identified.

Production can then be geographically dispersed, taking the process of specialization to a whole new level. The result is essentially the vertical disintegration of companies. The vertically integrated firm was once state-of-the-art, an organization that captured a plethora of synergies and economies of scale and

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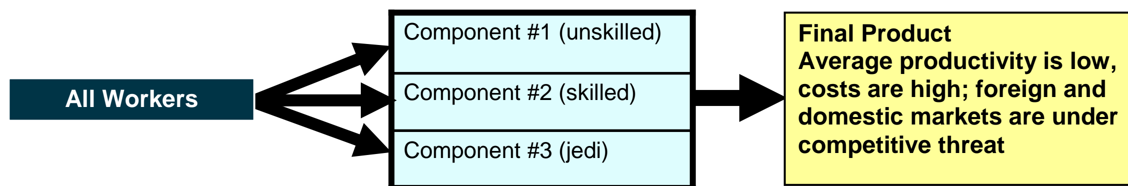
[2] *Jared Diamond, Guns, Germs, and Steel: The Fates of Human Societies, New York: W.W. Norton & Company, 1999.*

scope. Today, the firm may remain vertically integrated in virtual terms, but the locations are globally disintegrated in physical terms. Henry Ford’s assembly line goes global.

To illustrate, consider a domestic company, with the factory and headquarters all in the same building, producing a product using both skilled and unskilled workers, as well as super-skilled workers, or “jedi”.[3] The product is then sold globally. The company is meant to characterize the textbook vertically integrated firm, as laid out in the following schematic.

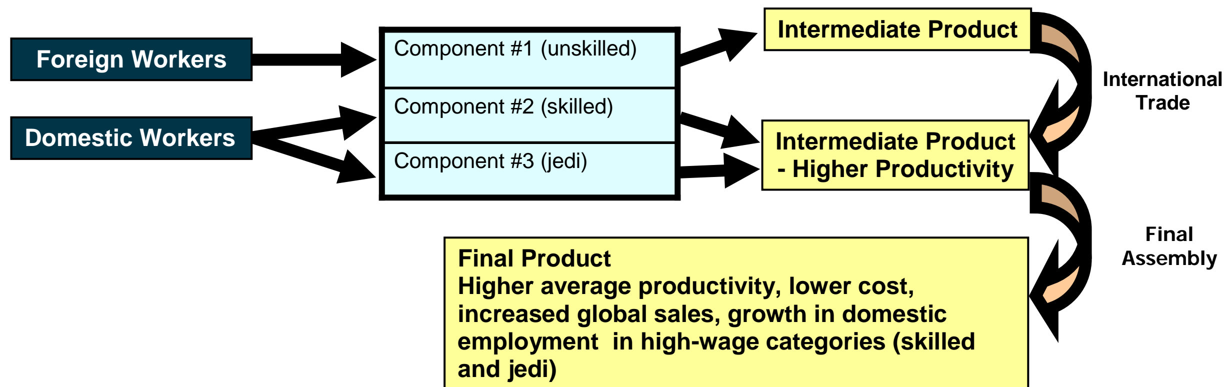
**Process #1: All workers make the same product from beginning to end**




The company perceives an opportunity to outsource the production of Component #1, as there are other companies that specialize in exactly that. The flatter world expands the set of possible production partners considerably, beyond specialized domestic sub-suppliers to include low-cost foreign manufacturers. In the past, using a foreign supplier might have meant carrying large inventories to insure against supply disruptions. In a flat world, computing technology and strong logistics support can make a global supply chain perform virtually just-in-time. Accordingly, the company reorganizes itself, as follows:

[3] *The term “jedi” is borrowed from the popular “Star Wars” series of films.*

**Process #2: Globalized production permits greater specialization**




The company now specializes in Components #2 and #3, while the foreign supplier specializes in Component #1. This means higher productivity in the domestic operation, lower costs overall and the ability to price the product more aggressively and increase global sales.

In this simple characterization, the company has moved the production of a specific component offshore. The real world is of course far more complex than this. The actual decision to move part of a supply chain offshore will depend on a lot of factors. In particular, activities that are capital-intensive rather than labour-intensive may cost almost as much to perform offshore as onshore. Also, there may be added costs associated with managing long supply chains as opposed to short ones. In effect, there is a continuum along which a specific company will choose the right degree of offshoring, which is suited to their particular capital structure and the location of their customers. And, should conditions change – perhaps technology gets updated so that the process becomes more capital intensive, or a customer moves and wants the supplier to be closer to them, or transportation costs rise – the optimal degree of offshoring fro a specific company can change, too. In other words, it could be fair game to see a company globalize part of its operation, and then to reverse that decision at a later time – such an observation would not signal the death of globalization.

What happens to employment at the domestic company? There is a natural tendency to focus on the potential immediate loss of domestic low-skilled jobs due to the globalization of the company. This concern is legitimate, but one should not lose sight of the full story. First, if the restructuring makes the company more competitive, its sales will rise. While this will mean importing even more components from the foreign supplier, it will also mean employing more skilled and jedi workers (higher-wage jobs) domestically. Ideally, the low-skilled domestic workers will have the opportunity to train for the new jobs being created up the value chain. In addition, the higher incomes being generated by the company are spent domestically and create other new jobs in the domestic economy, particularly in the service sector.

Furthermore, the final structure of the firm must be compared not to its starting point, but to what it might have looked like in the absence of the globalization. If the company's competition is going global, and our subject company does not, then the competition will be too steep and the domestic company may be forced out of business in any case, losing all the jobs rather than just the unskilled ones.

The implications for productivity are also very important. Obviously, if the low-skilled activities are removed from the operation, it is simply a matter of arithmetic that the value of output per worker in the domestic operation goes up. This is not because the workers left behind have become smarter, or faster, or use better technology. Rather, it is the mix of work being done domestically that has changed. And, if the low-productivity activities have moved not just out of the factory but out of the country, it follows that measured productivity for the economy as a whole will rise, by the same arithmetic. Indeed, it is this globalization effect that underlies much of the so-called "productivity miracle" that took place in the U.S. during the late-1990s and the early part of this decade.

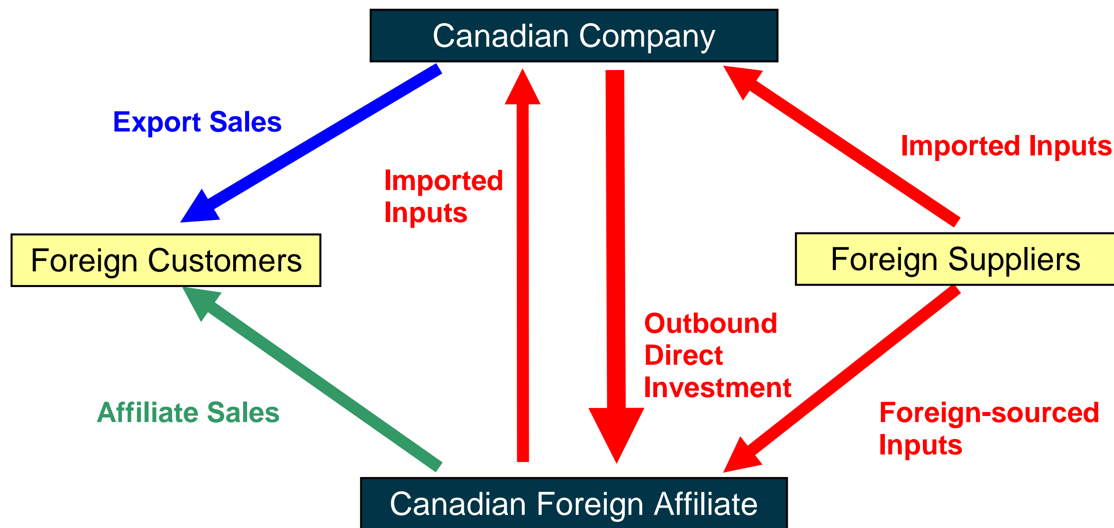
Finally, notice that the globalized company does much more international trade than before. Whereas in the past it used to move Component #1 from one part of its plant to another, it now must move the component from its offshore supplier to its domestic plant for final assembly. We refer to this as "supply trade." After that, the finished product is marketed to the world, as before, in the form of export sales, or "sales trade."

***Integrative Trade and Some Stylized Facts***

It is useful to summarize this new trade paradigm in the form of a simple economic model, as laid out in the figure below. We have called the new paradigm "integrative trade" because it integrates both export trade and supply trade, as well as the foreign direct investment flows that are needed to establish global supply chains.

One can think of the full integrative trade model as emerging from the growth process of the globalizing firm. In the beginning, the firm is engaged in traditional export sales, with all production taking place domestically. It then begins to import components in order to reduce costs, sharpen its price point and increase its export sales; in other words, the company imports more in order to export more. After a time, it purchases a foreign supplier, or perhaps creates a new one, thereby embedding the global supply chain in its own corporate structure. This creation requires that the company invest abroad – to undertake what the statisticians call "foreign direct investment". Finally, that foreign-based affiliate is in a position to develop export sales to third parties from that foreign location.

## The Integrative Trade Model




The emergence of integrative trade means that there is considerably more international trade involved in producing the next unit of output than in the past. Because integrative trade means that companies must trade components first – supply trade – and then trade their final products – export trade – many items are being traded more than once. Thus, in recent times international trade has been growing at about twice the pace of the global economy itself. This can cut both ways. During the global recession of 2008-09, there was a near-collapse of global trade which was much greater than the economic slowdown seemed to warrant. This was followed by an outsized rebound in trade as economic activity stabilized. Meanwhile, cross-border investment, which is crucial to setting up the global supply chains in the first place, has been growing even more rapidly than trade for a long time now.

One consequence of the growth in trade and cross-border investment is that economies today are even more intimately interconnected than they were in the past. Indeed, taking the fall of the Berlin Wall back in 1989-90 as a point of departure, the importance of international trade to income generation in the world has increased by approximately 50% in just 15 years. Back in 1990, less than 40% of global GDP depended on trade, while today that number is approaching 60%. This simple calculation puts some perspective on the (briefly) popular “decoupling” view, that the emerging world would be immune from the U.S. downturn during 2008-09; as it turned out, the world experienced the steepest and most highly synchronized downturn in history, simply because interconnectedness has been rising steadily.

Another consequence of integrative trade is that the world's trade infrastructure is coming under strain. Planning ports, bridges and rail systems to accommodate global economic growth is simply not sufficient, since trade is growing roughly twice as quickly as global GDP in order to generate that economic growth. In future, it will be necessary to over-invest in such trade infrastructure if economies are to capitalize on the globalization phenomenon.

Integrative trade is also changing the way we should think about trade statistics and trade policies. First, rather than being strictly bilateral, between two countries, trade has become much more triangular; more generally, it is multi-dimensional, but a triangle illustrates the concepts well. An economy's supply trade may be focused on one country, while its export trade may be focused on another. Thus, Canada can have a trade deficit with China, a key supplier, and a trade surplus with the U.S., a key buyer. Focusing on the bilateral trade balances misses the big picture, the fact that the three sides of the triangle are self-reinforcing. In short, we could not have all the U.S. exports without the important Chinese supply relationships that underlie the imports.

Second, trade is increasingly intra-firm in nature, because companies end up trading with their own foreign affiliates. To illustrate, more than half of China's exports today are not by Chinese companies but by foreign-based multinationals operating in China.[4] About half of U.S. imports today are intra-firm imports, and nearly one-third of U.S. exports are intra-firm. This alters the arithmetic of the much-analyzed U.S. trade deficit considerably. Indeed, depending on what level of cross-border ownership one requires before considering trade between two entities to be intra-firm, between half and two-thirds of the U.S. trade deficit is estimated to reside within multinational firms. This means that most of the deficit is intentional and self-financing, in contrast to conventional wisdom. Presumably, even if the U.S. dollar were to depreciate significantly, there would be very little impact on the trade deficit, since companies would still operate globally.

Some foreign affiliates are set up not to supply the owner company, but to service the foreign market directly. This arrangement may be a substitute for trade when there are trade barriers, for example, or when the sale requires face-to-face delivery. Financial services are a good example of the latter, and Canada's banks and insurance companies have been big investors outside of Canada for this reason. But consider that the U.S. economy generates annual GDP of approximately $15 trillion, while U.S.-owned foreign affiliates generate annual sales of $5-6 trillion from their non-U.S. locations, which is about triple the level of exports shipped from the U.S. Similarly, in the case of Canada, sales by Canadian-owned foreign affiliates amount to around $500 billion annually, which puts them in the same league as total export sales directly from Canada.

[4] *See David Hale and Lyric Hughes Hale, "China Takes Off", Foreign Affairs, November/December 2003.*

As a result of the emergence of the integrative trade paradigm, national economies today no longer fit inside the lines on the map. Companies are simply ignoring those geographical boundaries. This materially affects how we should look at trade and how we should interpret trade statistics.

***Implications for Financial Intermediation***

Export sales were never as easy as they appear on paper. Textbooks make it sound like Canada trades with the U.S., goods and services come in, goods and services go out, and all is very simple. The reality is that trade happens between companies, and it is almost always the case that the foreign buyer will want some time to get the Canadian imports into the retail chain before paying the exporter. Thus, the exporter sends the goods, and waits for payment, in effect absorbing a credit exposure on the buyer, and may be credit constrained at home in the meantime. Then, the foreign buyer might choose not to pay, or might encounter difficulties in paying, which puts all the attendant risks on the Canadian exporter. This is what account receivables insurance is designed for, to reduce the risk to the exporter of doing routine trade, and enhance the company's credit position with its house bank.

Alternatively, the foreign buyer might want to finance its purchase over a longer period, assuming the purchase was for some sort of capital good. For that, the financial intermediary would be asked to lend to a foreign buyer, and to hold the mortgage on that credit until it is repaid.

These forms of financial intermediation for traditional export trade are complex enough. But add the extra dimensions of supply trade, investing in foreign affiliates, and servicing third markets from those affiliates, and one has a much more comprehensive cross-border corporate arrangement that may need considerable financial facilitation, whether in the form of insurance or outright lending. Consider the difference between making an export sale, shipping the goods, and waiting 90 days for payment; and instead making a sizeable investment in a foreign economy and producing the goods or services right there. Rather than just taking repayment risk, the company is taking on risks related to a foreign legal system, foreign exchange risks, political risks and a host of other softer risks related to corporate social responsibility.

The fact remains that facilitating financially these extra dimensions of integrative trade may be crucial to the competitiveness of the domestic company. A foreign company with the same technology, the same global supply chain and a better, more flexible bank or insurance company could be more competitive than a domestic company with a less flexible financial partner, even if all other things remain equal. Increasingly, financial intermediaries must be ready to offer a multi-dimensional package of services to their client companies, just to keep them in the game.

***Implications for EDC***

EDC is Canada's official export credit agency. Export credit agencies were originally set up to facilitate traditional export trade for their resident companies. The idea is that given the risks of international trade, and the up-front investment involved in becoming a financial institution with a specialty in trade finance, the marketplace is incomplete. Export credit agencies fill the gaps that commercial financial institutions leave behind. Transactions can take the form of credit insurance, foreign buyer financing, and so on.

All of the transactions that EDC facilitates must be shown to benefit the Canadian economy. In the past, when trade was almost exclusively in the form of traditional export sales, the Canadian benefits test consisted of ensuring that the export had a high level of Canadian content. The emergence of integrative trade has challenged that basic thinking. Today, the average Canadian content of Canada's exports is around 70%; and that includes a lot of high-content resource exports, so it is evident that there are many sectors with much less Canadian content. For example, manufacturing sector exports have an average Canadian content that is around 50-55%, and for many goods the figure is much lower. This makes it harder for an agency like EDC to calibrate the economic benefits to Canada of the transactions it facilitates. Some export credit agencies have begun to shift from the requirement that something be "Made in…" to one that is "Made by…" in order to reflect this gradual change in how their globalizing companies operate.

At EDC, we have built a more comprehensive framework for assessing Canadian benefits to reflect this more complex world. That framework acknowledges that Canadian content is still important, but that other characteristics of a transaction may also confer a benefit on Canada. This would include such characteristics as: R&D spending in Canada by the company in question; whether the transaction is in a higher-risk market; whether the company is small and therefore less able to tap into the bigger institutions for assistance; whether the transaction will generate above-average Canadian employment benefits; and so on. Also, the framework acknowledges that cross-border investment is both trade- and prosperity-generating, and EDC is actively helping Canadian companies to grow and become more competitive through this channel.

Because it is EDC's job to bring financial and risk management capacity to the Canadian trade space, but in a manner complementary to the commercial market (in other words, to fill market "gaps"), EDC has adopted a partnership preferred philosophy to guide its operations. What this means is that, when EDC is asked for financial services, it will first seek to partner with a private-sector player in completing that request. This is viewed as good policymaking: it allows the private sector to set the terms of the transaction; the key relationship with the client is maintained primarily by the private sector; EDC brings more or less capacity to the table, depending on fluctuations in market conditions; and the model maximizes the likelihood that the private sector's presence in the trade space will grow over time. A

growing private sector presence would allow EDC to focus more on new trade frontiers, where there may be virtually no private sector financial capacity and EDC might end up acting alone, yet still under either a commercial model or in line with international trade rules. To illustrate the importance of this operating philosophy, in recent years around three-quarters of the loans extended by EDC have been explicitly in partnership with the private sector.

***The bottom line?***

The world is going global at a rapid rate, and a new trade paradigm is emerging. This reflects a force of nature, not a whimsical fad. Traditionally a trading nation, Canada is finding it necessary to adapt quickly to this new world in order to remain competitive and to grow.

Canada's trade infrastructure will need to be enhanced continuously to facilitate this transition. This includes physical elements, like ports, bridges and border facilities, which must be prepared for trade to continue to grow much more quickly than the economy. It also includes more free trade and foreign investment protection agreements with strategic foreign economies. It will require more Canadian presence on the ground in those foreign markets. And, it will require increasingly flexible and sophisticated financial intermediation, from commercial and official sources alike.