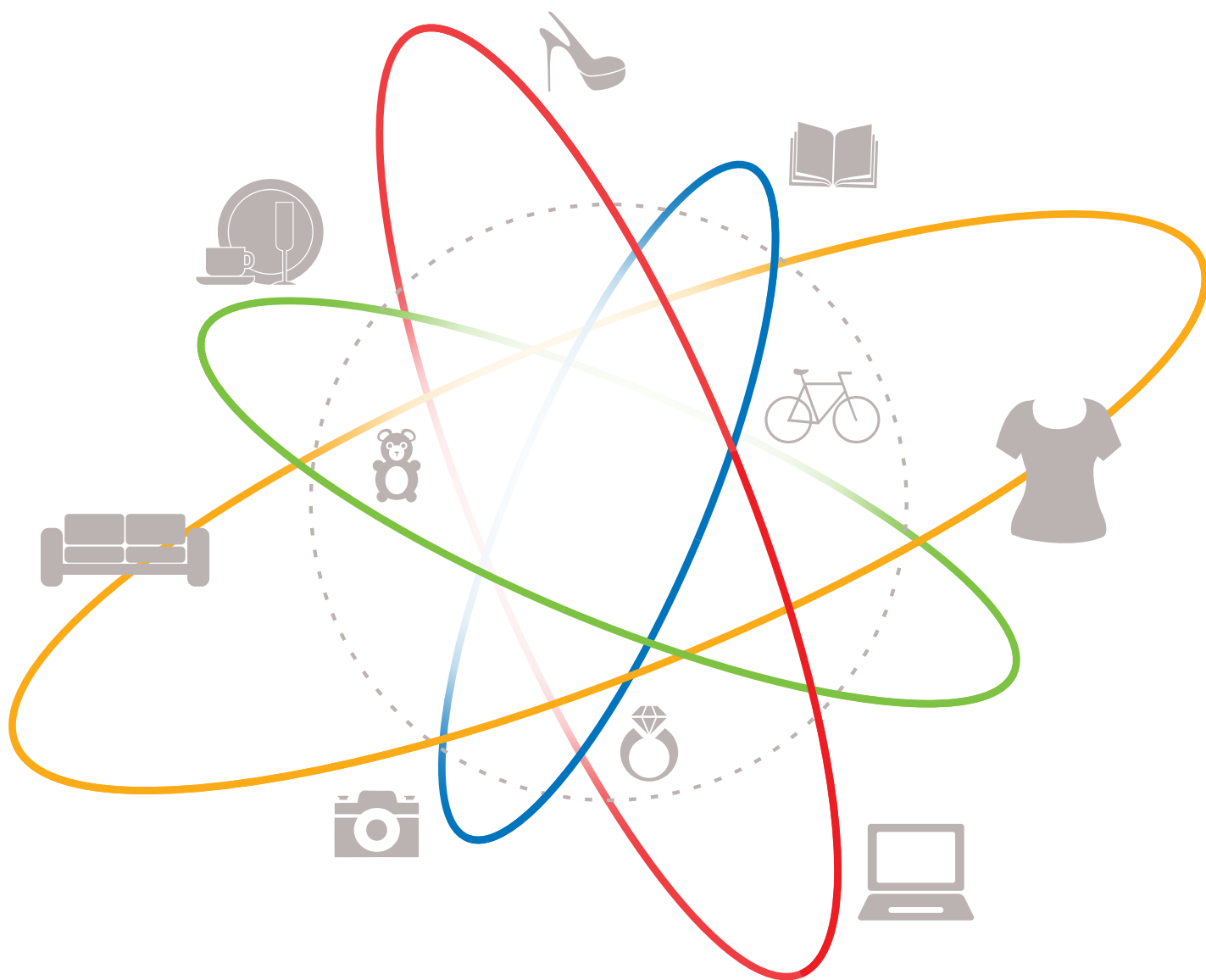


COMMERCE 3.0: CREATING MORE OPPORTUNITY IN ASIA PACIFIC

June 2013



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MESSAGE FROM JAY LEE, MANAGING DIRECTOR, EBAY ASIA PACIFIC



International trade has traditionally been an arena for only the largest players. Similarly, most efforts to dismantle trade barriers have focused on large-scale international business. But eBay's experience is markedly different. From our earliest days, international trade has been one of the most appealing features of our global marketplace. Today, it represents a significant and growing opportunity for small and large merchants alike.

To gain additional empirical evidence of the extent of this opportunity, we commissioned the global law firm Sidley Austin LLP to study and analyze international trade flows and exporting behavior in offline channels and via eBay.

This report outlines our findings, which reveal some astounding facts about technology enabled commerce. These results showcase the power of the Internet to enable small and medium businesses from every corner of the globe to overcome traditional barriers to international trade. While the study is based on data from eBay transactions, its findings have universal applicability.

I'm excited to share this report and hope it resonates with you. As eBay Marketplaces President Devin Wenig said: "The future of commerce is global. In a connected commerce world, consumers shouldn't care whether the product they want is in a neighborhood store, or in a shopkeeper's window halfway around the world."¹

Jay Lee

MANAGING DIRECTOR
EBAY ASIA PACIFIC

¹ <http://blog.ebay.com/2012/10/the-new-ebay/>

EXECUTIVE SUMMARY

International trade is traditionally associated with large corporations that can afford the huge fixed costs required to ship goods across the globe. But new data from eBay Inc. demonstrates that technology, and the Internet in particular, is today allowing businesses of all sizes – even the smallest – to engage in and benefit from cross-border trade, with widespread economic benefits.

In Asia Pacific, commerce has reached an inflection point. According to research firm eMarketer for the first time ever, Asia Pacific is set to surpass North America to become the world's No1 market for B2C ecommerce sales.

Worldwide e-commerce sales exceeded \$1 trillion, The first \$1 trillion mark was reached in 2012, with sales up 21 percent from the previous year. It is expected this year that sales will grow another 18 percent to end 2013 at \$1.3 trillion in worldwide sales.

eBay Inc. commissioned Sidley Austin LLP to analyze international trade flows and exporting behavior, comparing offline channels with eBay. Our aim was to understand how international trade is evolving and the role that the Internet and technology have played in opening world markets for consumers, merchants of all sizes, and countries at all stages of development.

Although it was an empirical study based on real trade-flow data and focusing on eBay transactions, we do not see it as being relevant only to the eBay Marketplace. Rather it sheds light on an evolving, new and powerful type of commerce – technology enabled, multichannel and consumer-driven.

The study's findings have applicability far beyond eBay, and reveal some astounding insights.

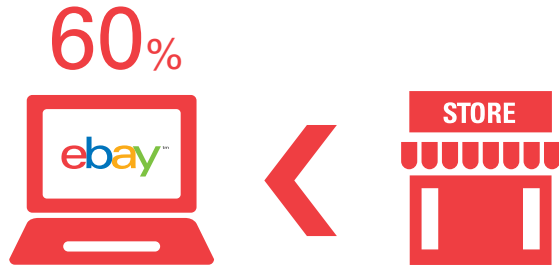
First, ecommerce is lowering trade barriers. eBay is more effective than offline channels in reducing the negative effect of trade costs on international trade. This is illustrated by the fact that trade costs "matter" 60% less (in other words are 60% less likely to discourage trade) for eBay transactions than for offline trade.

The study's findings have applicability far beyond eBay, and reveal some astounding insights.

1 E-commerce is lowering trade barriers

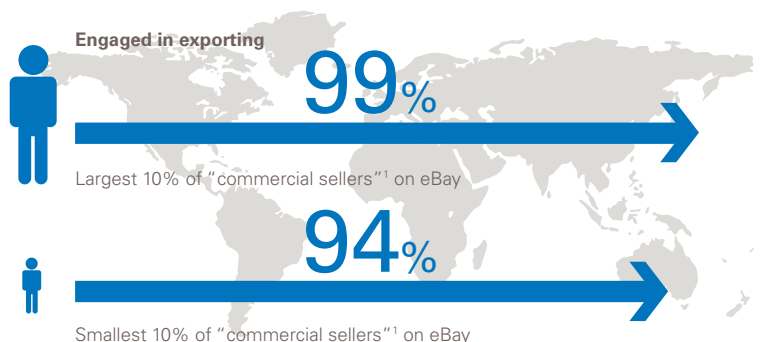
eBay is more effective than offline channels in reducing the negative effect of trade costs on international trade. Trade costs "matter" 60% less (in other words are 60% less likely to trade) for eBay transactions than for offline trade.

Trade costs "matter" less



2 With lower trade barriers online, more sellers are able to reach more international markets

Not only is exporting easier via eBay, it also makes cross-border selling equally as simple for small sellers as it is for large sellers. Only 5% of commercial sellers are single-country exporters, with a remarkable 81% selling to five or more countries.



“I BELIEVE THAT YOU’RE GOING TO SEE MORE CHANGE IN HOW CONSUMERS SHOP AND PAY IN THE NEXT THREE YEARS THAN WE’VE SEEN IN THE LAST 20 YEARS”

EBAY INC. CEO JOHN DONAHOE

3 Lower trade barriers and the ability to reach global markets provide newcomers to online business with **greater opportunities to grow faster and succeed**

After five years, newcomers on eBay have a much higher combined market share (22%) than do new offline businesses (13%). Moreover, small and large sellers have high, and fairly comparable, survival rates on eBay.

Chances of survival for new businesses (first 5 years)



Second, with lower trade barriers online, more sellers are able to reach more international markets. Not only is exporting easier via eBay, it also makes cross-border selling equally as simple for small sellers as it is for large sellers. Ninety-four percent of the smallest 10% of “commercial sellers”² on eBay engage in exporting, not far behind the largest 10% (99%). And only 5% of commercial sellers are single-country exporters, with a remarkable 81% selling to five or more countries.

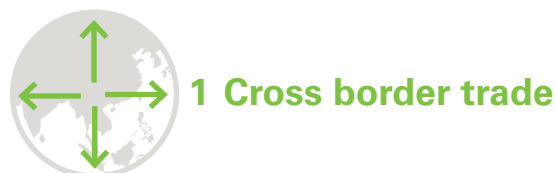
Third, lower trade barriers and the ability to reach global markets provide newcomers to online business with greater opportunities to grow faster and succeed. After five years, newcomers on eBay have a much higher combined market share (22%) than do new offline businesses (13%). Moreover, small and large sellers have high, and fairly comparable, survival rates on eBay. The largest 10% of commercial sellers have a 71% chance of surviving the first five years, while the smallest 10% have a 54% chance. This compares with a survival rate of just 24% for offline businesses.

Finally, lower trade costs translate directly to benefits for consumers. Sidley’s study estimates the potential welfare gains in three scenarios: 1) a move from a “closed economy” to an economy open to cross-border eBay trade would increase consumer welfare by an average of 77.5% of the amount currently spent online 2) consumers experience an increase in real income currently spent online by an average of 42% by transacting on eBay instead of offline channels; and 3) if consumers worldwide conducted all their international transactions on eBay instead of offline, the average increase in real GDP would be 15.6%.

In the first two scenarios, developing countries stand to benefit most, whereas small and trade-liberal countries reap the largest benefits in the third.

This report does not suggest that all trade can or should be moved onto eBay. These estimates indicate the potential benefits of moving in the direction of these scenarios. In doing so, the potential gains are large for consumers, developing countries and exporters and importers of all sizes.

4 Lower trade costs translate directly to **benefits for consumers**



² Sellers with annual sales above USD \$10,000.

With this in mind the Sidley study offers valuable fresh insights into the potential of technology-enabled commerce and how it can impact trade and development policies.

And Sidley's findings only describe the first part of a journey, and what the Internet and technology have achieved to date. The picture that emerges is of a future in which online marketplaces such as eBay have turned global trade into everyday commerce: an activity in which consumers and merchants of all sizes comfortably engage.

These findings have special resonance for the Asia Pacific region, in view of its rapid progress and continued focus on international trade as a driver of growth and development. Most businesses in the region are small and medium enterprises (SMEs) which, as this report outlines, stand much to gain from technology-enabled commerce.

In addition, the growth opportunities it represents provide an additional perspective for policymakers as they pursue strategies to drive national and regional competitiveness. This applies equally in mature markets

Technology is evolving rapidly. The near future will likely present ever more efficient channels and mechanisms for connecting consumers and traders worldwide. eBay Inc. CEO John Donahoe says, "I believe that you're going to see more change in how consumers shop and pay in the next three years than we've seen in the last 20 years."

This report tells the story of what can be achieved in the expansion of world trade if the appropriate conditions and support are put in place. eBay, for instance, encompasses an online marketplace, the payment service PayPal, and e-commerce and marketing service provider GSI. These act in an integrated way to enable commerce and connect buyers and sellers.

In summary, technology-enabled trade is an important tool by which developing countries and businesses of all sizes, under the right circumstances, can gain access to world markets.

INTRODUCTION

Since the 1970s, heavily laden container ships have been one of the most widely perceived symbols of global trade. Policy discussions around trade have, thus, been dominated by the interests of the largest businesses engaged in container importing and exporting. A key traditional focus of the World Trade Organisation (WTO) has been to dismantle barriers to large-scale trade, and to open service and agricultural markets.

eBay's experience eschews this traditional model. From its earliest days, international trade has been an appealing feature of our business. Today, it is a significant and growing opportunity for small and large merchants alike, representing 20% of our Gross Merchandise Volume in the last quarter of 2010.

eBay commissioned Sidley Austin LLP to study and analyze international trade flows and exporting behavior, comparing offline channels and eBay³. The brief was to examine how world trade is evolving, and the role that new trade channels, such as eBay's online marketplace, plays in its development.

We wanted this to be an empirical study based on real trade-flow data⁴. This meant that it would have to focus on eBay transactions. These of course are hugely significant in their own right. eBay encompasses both an online marketplace, with 39 markets and over 97 million active users worldwide, and the payment service PayPal with over 100 million active users available in 190 markets and 25 currencies. The third leg of eBay, GSI, was added in 2011. These entities operate in an integrated way to enable commerce and connect buyers and sellers globally.

Nevertheless the relevance of this research is not limited to the eBay Marketplace. Rather we see eBay as exemplifying a new, evolving and powerful type of commerce – technology-enabled, multichannel, and consumer-driven. The findings of this study therefore have implications far beyond eBay.

They also reveal some compelling facts about commerce. Most strikingly, we see a “shrinking” of the world because of the way in which online marketplaces can enable trade that would otherwise not occur, in places where the barriers to trade were previously too great, and make existing trade more efficient. Moreover, access to online channels facilitates exporting and allows new market entrants to gain market share quicker and survive longer compared to those using only offline channels. Building on these findings, we are able to project consumer welfare gains associated with the new, more efficient trade enabled by eBay.

The findings in this study are based on data from US-based businesses. But we believe they have implications, in particular, for the rapidly growing Asia Pacific market. International trade is a key driver of growth and development for the region, and the finding that technology-enabled commerce can bring down trade barriers and enable more cross-border business represents an exciting opportunity. Further, given that the vast majority of enterprises in the Asia Pacific region are SMEs, the central finding that technology-enabled commerce enables small enterprises to compete successfully alongside large businesses is of special relevance.

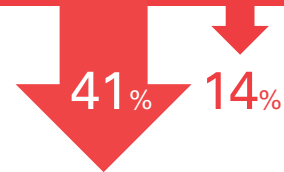
³ The study was conducted by a team of economists under the supervision of an outside expert, Professor Marcelo Olarreaga of Geneva University, and of Dr. Simon Schropp of Sidley Austin's Geneva office, with the support of Christine Barthelemy (Sidley Austin Geneva), Andreas Lendle (Graduate Institute, Geneva) and Dr. Pierre-Louis Vézina (Oxford University).

⁴ See Annex for the datasets and methodologies used by Sidley.

TRADE BARRIERS COME DOWN ONLINE

>60%

eBay is more effective than offline channels in reducing the negative effect of trade costs on international trade. Trade costs – matter **60% less for eBay** transactions than for offline trade.



Between 2005 and 2009, the trade-impeding effect of distance between trading partners declined by **41% for eBay** transactions, compared to only 14% for offline trade.

eBay:

- 1** **Helps buyers and sellers overcome traditional trade impediments**, such as large distances between countries, absence of common borders or differences in GDP levels; and
- 2** **Reduces the effect of institutional differences**, such as different laws or levels of corruption.

Shipping costs and language barriers

can have a negative effect on cross-border transactions on eBay.

Online marketplaces such as **eBay create new trade patterns and make existing trade more efficient**. We can conclude that policy efforts to create a harmonized, integrated market for buyers and businesses have a positive impact on cross-border online trade.

THE DEATH OF DISTANCE

The greater the distance between market participants the less likely they are to transact with each other. Despite claims to the contrary⁵, *distance matters* for trade in the offline world⁶. Here, “distance” accounts for a range of – usually unobserved – transaction-related costs (these are analyzed individually in Figure 1).⁷

Distance is a factor of considerably less importance for eBay transactions than for offline trade.⁸This is illustrated by Figure 1.

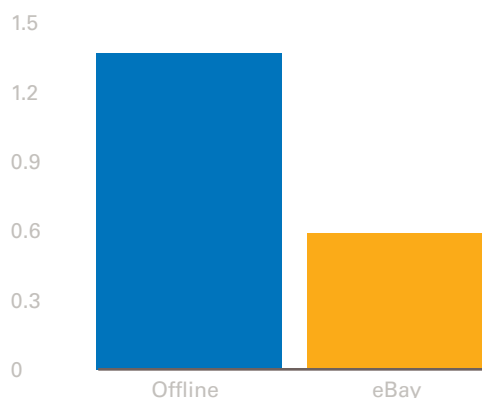
Figure 1 shows what happens to offline and eBay trade flows⁹ when distance increases by 1%.¹⁰ For offline trade, a 1% increase in geographic distance reduces trade by 1.4%, while it reduces eBay trade by only 0.6%. Distance, thus, matters 2.33 times more for offline than online transactions. This suggests that, compared to offline trade, there is more trade among distant countries on eBay.¹¹ In other words, eBay is “shrinking the world.”

Analyzing the data over a five-year period, the trade-reducing effect of distance is declining for both offline and eBay trade. Figure 2 demonstrates, however, that the trade-reducing effect of distance is declining more rapidly for eBay trade compared to offline trade. The trade-impeding effect of distance has dropped by 41% for eBay trade compared to only 14% for offline trade. The probability of matching distant buyers and sellers increases faster over the years for eBay transactions than for offline trade.

The fact that distance matters less for online trade is especially relevant in the Asia Pacific region due to its sheer size. Moving goods from Western China to

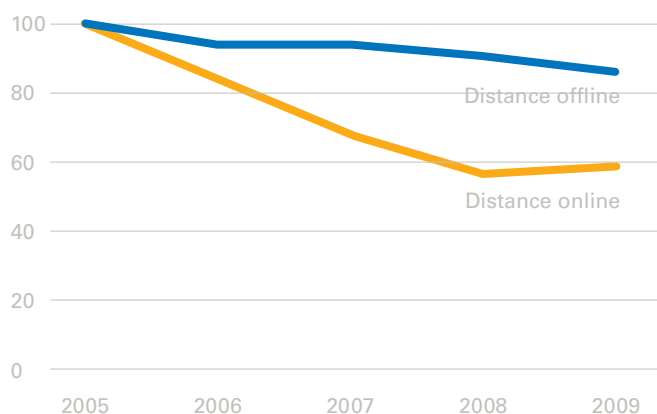
New Zealand is difficult simply because of the distance. Moreover, the Asia Pacific region places a strong emphasis on international trade – the Asia Pacific Economic Cooperation (APEC) hails trade liberalization and facilitation as the cornerstones of its mission and activities. APEC has worked towards reducing tariffs applied in its member economies and has seen an increase in total trade from US\$3.1 trillion in 1989 to US\$19.7 trillion in 2011. As Asia-Pacific countries seek to increase trade with each other and the rest of the world, the finding that distance matters less online is good news.

FIGURE 1: **DISTANCE MATTERS LESS ONLINE**



Note: This chart applies a simple gravity model to online and offline trade-flows. A large value indicates that an increase in distance between two market participants reduces trade flows by a larger percentage.

FIGURE 2: **DISTANCE IS “DYING” FASTER FOR EBAY TRADE**



Note : This chart measures the death of distance over time in percentage (2005=100%). In absolute terms, distance is always a factor of less importance for eBay than for offline transactions. The chart shows that the importance of distance declines faster for online than for offline trade.

⁵ See for example Friedman, Thomas L. (2005). *The world is flat*. Farrar, Straus & Giroux; Cairncross, Frances (1997). *The Death of Distance*. Cambridge: Harvard Business School Press.

⁶ See for example Carrere, Celine, Jaime de Melo and John Wilson (2009). *The Distance Effect and the Regionalization of the Trade of Developing Countries*. CEPR Discussion Paper 7458; Disdier, A. and K. Head (2008). *The Puzzling Persistence of the Distance Effect on Bilateral Trade*. *Review of Economics and Statistics* 90(1), 37-48.

⁷ Geographical distance is used as a proxy for a range of trade costs that are often not observed directly (shipping costs, market searching and matching costs, etc.). The authors also control for a range of other trade impediments that are – at least indirectly – observable, such as institutional costs (e.g., different legal systems across countries), presence or absence of a free-trade agreement, sharing a common border or language, and issues of trust and enforcement (e.g., high levels of corruption, low levels of rule of law, problems of enforcing legal claims across borders).

⁸ The methodology used to arrive at this finding is a “gravity model” incorporating both traditional gravity control variables (publicly available data for offline transactions) as well as a unique set of online trade flow data from eBay. The gravity equation was then applied across all years for online and offline trade.

⁹ Across all SAP product categories and all years

¹⁰ Thus, a value of 1 means that a 1% increase in distance between seller and buyer equally reduces trade by 1%.

¹¹ The robustness of this finding has been checked to ensure it is not driven by any outlier variable or composition effect that occurred during the aggregation of the results. The basic gravity regression was therefore repeated for online and offline trade for each of the 29 SAP categories, by year, by eBay site, for B2C and C2C commerce separately, and including domestic trade. The result was that the finding is robust and not driven by composition effects.

¹² Note that the finding of a shrinking importance of the distance coefficient for offline trade somewhat contradicts findings of previous studies of offline trade, which find little to no indication for a “death” of distance. This may be explained by the country or product composition on which the Sidley study focuses.

MOST TRADE BARRIERS ARE LOWER ONLINE

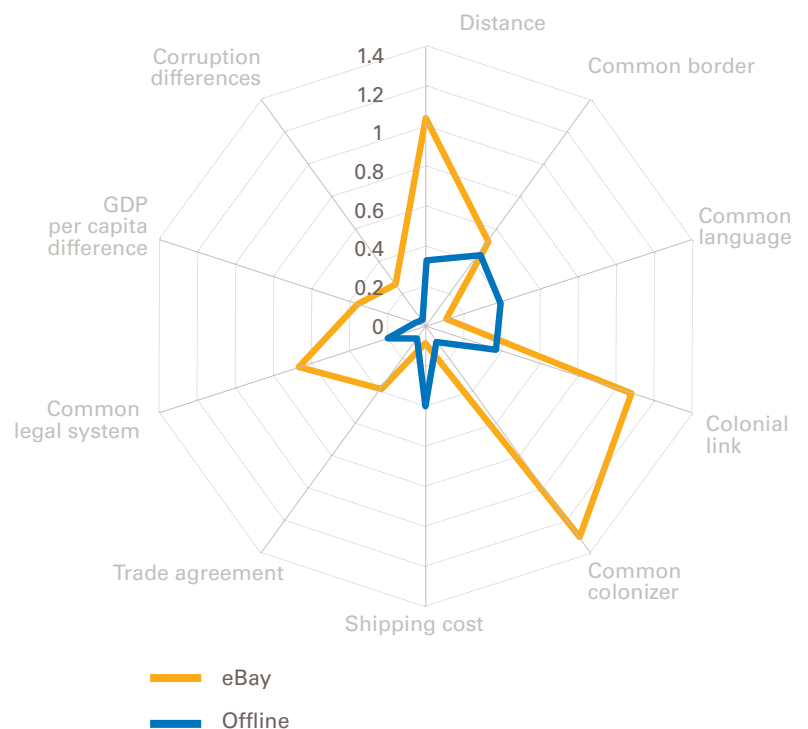
It is an important finding in itself that distance matters considerably less for eBay trade than for offline trade. However, as mentioned, “distance” accounts for a range of different transaction-related costs, which are likely to have a varying degree of importance for international trade.

The transaction costs studied include traditional trade costs (shipping costs, absence of a common language, of a common border, of a direct colonial link) as well as institutional differences between countries (presence or absence of a trade agreement, difference in GDP per capita, difference in legal traditions).¹³

Figure 3 charts these trade costs and their trade-impeding effect for offline and eBay trade. The coefficient reflects the degree to which these indicators reduce trade flows:

Example 1: In jurisdictions that have an uncommon legal system, trade flows offline decrease by almost 50% (0.5) when compared with those that have a common legal system (for example a legal tradition such as common law compared to civil law), whereas for eBay trade the decrease is only around 20% (0.2).

FIGURE 3: MOST TRADE COSTS MATTER MORE OFFLINE THAN ONLINE



Note: For binary variables such as common colonizer, colonial link, common border and common language, the estimated coefficient is corrected to capture percentage changes.

¹³These costs were factored in as control variables into the gravity model. Control variables: 1) Reduce the error term and therefore help explain trade flows; 2) Eliminate the bias on the distance coefficient that may be due to omitted variables that are correlated with distance (for example common language, or common border). Take for example the control variable “common language”: Clearly, not speaking the same mother tongue is an impediment (or “trade cost”) to international trade. Controlling this variable means considering explicitly all country pairs that do (not) share the same mother tongue. By adding “common language” as an explanatory variable, the resulting coefficient on “distance” changes; it now explains only the residual trade costs *without* common language issues.

FACTORS MAKING A DIFFERENCE ONLINE

Example 2: Moving from a situation in which a country pair of trading partners has no colonial link to a pair that does, trade flows offline increase by almost 150% (1.5), whereas eBay trade increases around 35% (0.35). Thus, eBay trade is less driven by a common colonial history of two trading partners.

Figure 3 shows that geographical distance, common border and common legal system are significant factors for both offline and eBay trade. However, in all instances the importance of these factors is considerably less for eBay trade.

All the traditional trade costs and institutional factors, with the two exceptions of shipping costs and no common language, matter less for eBay trade than they do for offline trade.

In fact, controlling for trade costs and institutional factors increases the “distance differential” (the difference in distance coefficients between eBay and offline trade). Accordingly, online marketplaces, in this case eBay, enable more – and more distant – market participants to transact by helping them to overcome a variety of trade barriers. This is creating new and different trade patterns and makes existing trade more efficient.

Figure 3 demonstrated that shipping costs and language are factors that have a greater impact on cross-border trade via eBay than offline:

- The trade reducing effect of *shipping costs* is four times larger on eBay compared to offline trade. Shipping costs tend to represent a larger share of the value of each online transaction because products traded on eBay are rarely shipped in bulk.¹⁴
- In relation to the factor *common language*, online transactions often involve direct interaction between the seller and buyer, thus magnifying language barriers, while offline trade occurs through distributors, retailers and other middlemen.

¹⁴In addition, online shipping costs reach the end-consumer directly. Thus, shipping costs include the “last mile,” which usually represents an important cost factor that is not integrated in offline shipping statistics.

ENTERING GLOBAL MARKETS



Lower online trade barriers online

allow eBay sellers to reach more international markets.

>97%

Reaching foreign markets is much easier for sellers on eBay than for offline businesses: **97% of commercial sellers on eBay export.**



Sellers reach multiple markets from eBay: On average, US commercial sellers selling abroad on eBay reach 19 countries. **Only 5% of those sellers are single-country exporters, and a remarkable 81% sell to five or more foreign countries.** Similarly, in Asia Pacific, 82% of sellers sell to buyers outside of their countries while nearly 60% sell to five or more foreign countries.

>94%

Exporting is as easy for small sellers as it is for large sellers: **94% of the smallest 10% of commercial sellers on eBay engage in exports, not far behind the largest 10% (99%).**

Online marketplaces, such as **eBay**, **enable market diversification and global reach for merchants of all sizes.**

SMALL AND LARGE SELLERS VENTURE ABROAD

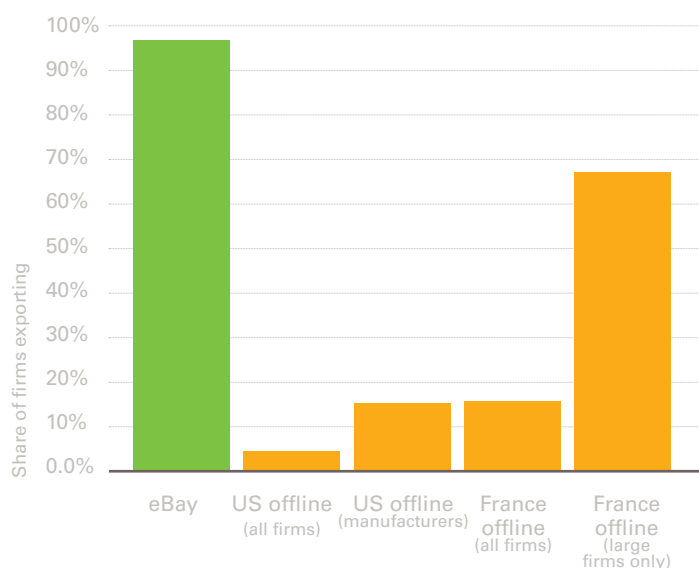
In traditional offline markets, it is rare for a business to engage in exporting. Generally, exporting entails costs that only larger businesses can afford.¹⁵ A wide range of recent empirical literature confirms that relatively few offline firms have the capacity to export.

A widely cited paper on US business behavior, Bernard *et al.* (2007), showed that a remarkably small proportion of US businesses engage in international trade. Of 5.5 million businesses operating in the US in 2000, only 4% exported. Bernard *et al.*'s data sample includes *all* US businesses. Many of these were small retailers which would be unlikely to export.¹⁶ Nevertheless, the percentage of businesses exporting is surprisingly low.

Similar evidence can be found in other countries. For example, a study of French firms, which has been widely cited in trade literature, shows that only 15% of manufacturers export (Eaton *et al.*, 2009). The French data also reveals that exporting is almost exclusively performed by large firms: only 3% of the smallest 10% of French firms (measured by total sales) export, while 65% of the largest 10% firms export.

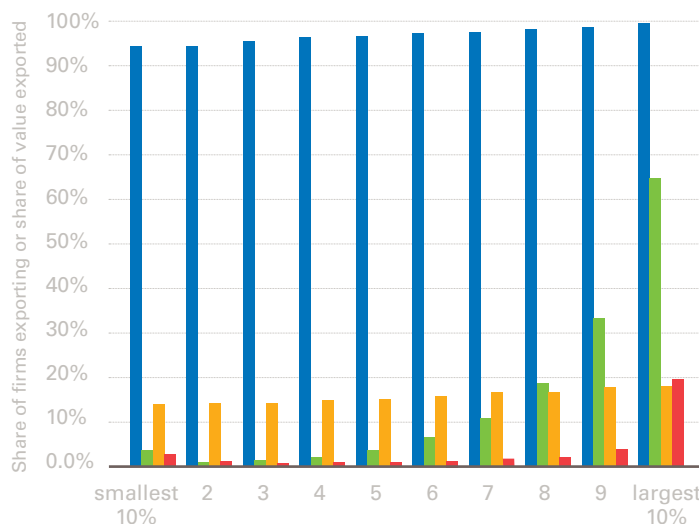
While there has been less research on the behavior of firms in Asia Pacific, existing studies largely confirm the abovementioned findings. Using data from Thai manufacturing firms, Cole *et al.* (2008)¹⁷ finds that firm size is an important determinant of export decision and that small firms are less likely to become exporters than large firms. In addition, the results find that foreign ownership is positively correlated with the likelihood of a firm deciding to export. This is consistent with an earlier study by Sjöholm (2003)¹⁸ of Indonesian firms which also finds that foreign ownership significantly increases the probability of a firm exporting.

FIGURE 4: **SHARE OF SELLERS EXPORTING – EBAY VERSUS OFFLINE**



Source: eBay: data for 2010, sellers with sales of at least USD 10,000. US offline: Bernard *et al.* (2007). France (all businesses): Eaton *et al.* (2009). France (large businesses only): Mayer & Ottaviano (2007).

FIGURE 5: **SHARE OF SELLERS EXPORTING AND SHARE OF VALUE EXPORTED BY DECILES**



Source: eBay data for 2010, sellers with sales of at least USD 10,000. France: Eaton *et al.* (2007).

¹⁵Such costs could, for example, include finding foreign customers, setting up a distribution network, dealing with international shipments, different technical and other regulations, etc.

¹⁶Bernard *et al.* (2007, Table 3) find that exporting US businesses are on average 148% larger, have 26% percent higher value added per worker, and 119% higher employment rates.

¹⁷Source: Cole, Matthew, Robert Elliott, and Supreeya Virakul. (2008), "Firm Heterogeneity and Export Participation: A New Asian Tiger Perspective", University of Nottingham Research Paper Series

¹⁸Source: Sjöholm, F. (2003), "Which Indonesian Firms Export? The Importance of Foreign Networks", Papers in Regional Science, Vol. 82, No. 3, pp. 333-350.

A very different picture emerged from Sidley's study of the exporting behavior of US sellers on eBay.¹⁹ The analysis showed that these sellers are unique in two respects.

First, a remarkably high share of US sellers on eBay engage in cross-border sales. Of those sellers considered to be commercial sellers, a staggering 97% export²⁰. Figure 4 compares this figure with the available offline data.

Second, the share of sellers exporting via eBay and the share of their export sales are almost identical irrespective of size. Figure 5 compares small and large sellers on eBay with small and large French businesses, both divided into deciles.²¹

Figure 5 shows that small and large sellers on eBay are almost equally likely to export. Even the smallest 10% of commercial eBay sellers overwhelmingly engage in exports (94%). Small sellers on eBay export a share of 14% – little different from the behavior of the largest 10% that export a share of 18%.

In contrast, almost none of the smaller offline businesses export. Even the largest French offline businesses have much lower export shares than small eBay sellers. The share of sales exported reaches the eBay level only in respect of the largest French businesses.²²

These results reinforce two conclusions:

- 1 Reaching foreign markets is much easier for sellers on eBay than for offline businesses.
- 2 It is as easy for small sellers online to export as it is for large sellers.

This finding has strong implications for Asia Pacific economies because of the sheer number and economic significance of small businesses in the region. SMEs have long been an engine of growth and development, as well as a significant source of employment creation in Asia Pacific. According to the Asia Pacific Economic Cooperation (APEC), SMEs make up approximately 90% of businesses and employ up to 60% of the workforce.²³ In some countries such as Indonesia, SMEs employ around 99% of the workforce.²⁴ These SMEs also contribute significantly to national GDP. In Southeast Asian countries, the contribution of SMEs to GDP ranges from 30% to 53%.²⁵

Although SMEs play a significant role in the domestic economies of many Asian countries, their share of total export earnings is relatively low. According to the Association of Southeast Asian Nations (ASEAN), the contribution of SMEs to exports is between 19% and 31%.²⁶

This suggests that there is a huge potential for progress to be made in relation to SME exports in Asia Pacific. Policymakers in the region have already been thinking about how to boost SME exports. During the 35th APEC SME Working Group Meeting in August 2012, officials paid particular attention to creating a favorable environment for SME exports and assisting SMEs in internationalizing operations and supporting export-oriented SMEs. Technology-enabled commerce, by instantly providing SMEs with global reach, can be an area through which SMEs in the region can expand into international markets.

¹⁹This largely covers trade occurring on eBay.com; however, the data also includes sales of US sellers through foreign eBay sites. Sales of non-US sellers on the US site are excluded. The "nationality" of a seller is based on the country in which the seller is located.

²⁰This figure and the following charts were calculated based on 2010 data. Results are very similar for years 2006-2009. If we include all sellers, i.e., also those below the USD 10,000 threshold, we still find an export rate of 69%, even though this includes many users with negligible sales.

²¹The sellers/businesses are sorted by sales value and then grouped into 10 equally large clusters ("deciles"). The first decile consists of the 10% smallest sellers/businesses; the second decile contains the next 10%, etc. The 10th decile then consists of the 10% of businesses with the largest sales values.

²²One should also note that the largest French businesses are much larger than the largest eBay businesses. Nevertheless fewer of them export.

²³Source: Asia-Pacific Economic Cooperation.

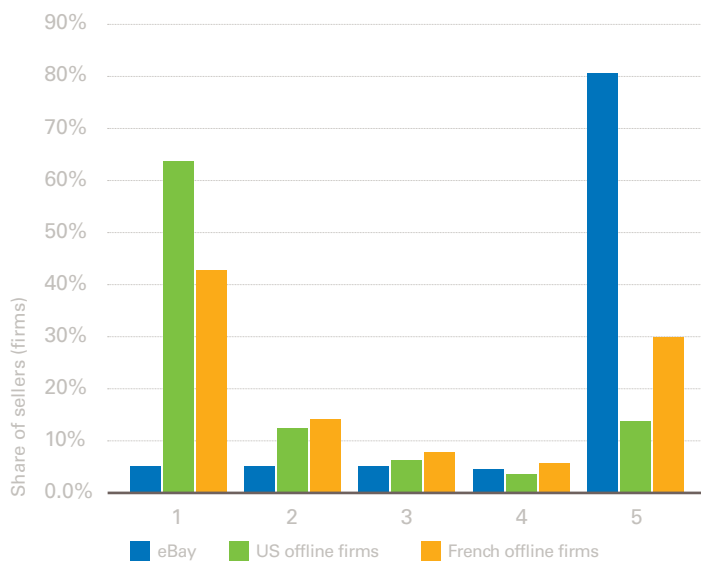
²⁴Source: UNESCAP.

²⁵Association of Southeast Asian Countries.

²⁶Association of Southeast Asian Countries.

REACHING MORE MARKETS

FIGURE 6: NUMBER OF EXPORT DESTINATIONS – EBAY SELLERS VERSUS US AND FRENCH BUSINESSES



Sources: eBay – data for 2010 (exporting sellers with annual sales above USD 10,000); U.S. – Bernard *et al.* (2007); France – Mayer & Ottaviano (2007).

Offline businesses usually export to a few select markets only. Of the few offline US businesses that export (4%), 64% export to a single country. Only 14% of exporting businesses sell to five or more countries. Although French businesses tend to export to more countries than their US counterparts, 43% of French businesses sell to a single country only.²⁷

These results represent a complete contrast to the experience of commercial sellers on eBay. In the US, only 5% of those sellers are single-country exporters, and a remarkable 81% sell to five or more countries. A similar pattern is emerging in the Asia Pacific region, with 82% of sellers engaging in exports and nearly 60% selling to five or more countries.

Figure 6 compares export markets for online and offline exporters. While few offline businesses export to multiple markets, we find that most US sellers on eBay export to several countries. On average, US sellers on eBay selling abroad reach 19 countries.

In the offline world, the few businesses that export to five or more countries tend to be much larger than single-country exporters.²⁸ The smallest 10% of eBay sellers that export more than USD10,000 (“regular exporters”) on eBay not only serve multiple markets, but reach most of the largest markets.²⁹

FIGURE 7: NUMBER OF EXPORT DESTINATIONS – SMALL VERSUS LARGE EBAY EXPORTERS

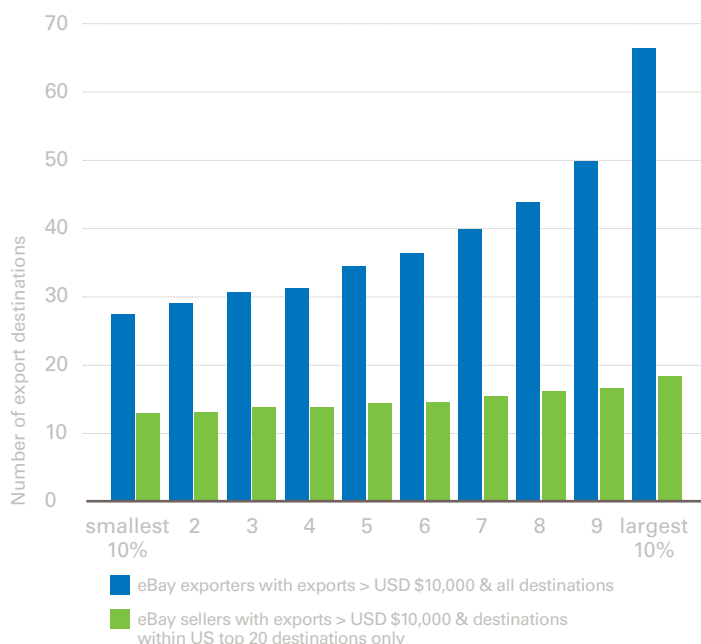


Figure 7 shows that the smallest 10% of regular exporters serve 28 markets on average, and the largest 10% sell to 66 markets, just over twice as many. The difference between the number of markets reached by small and large regular exporters decreases further when focusing on the 20 largest markets. The smallest regular exporters sell on average to 13 out of the 20 largest markets, whereas the largest regular exporters reach 18 out of 20 markets.

²⁷ Source: Mayer & Ottaviano (2007).

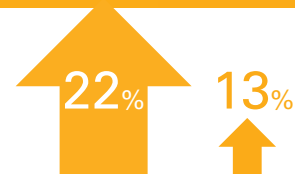
²⁸ For example, while only 14% of US exporters sell to five or more countries, those businesses account for 93% of all US exports (see Bernard *et al.* (2007), Table 4).

²⁹ Small eBay sellers, by definition, have small sales volumes. They do not reach many clients – nationally or internationally. This largely explains why they reach only relatively few markets. In other words, because the number of transactions is small, these sellers only reach a limited number of usually large markets, but not necessarily because exporting to more and smaller markets is too costly.

GROWING AND SUCCEEDING

With lower trade barriers and the ability to reach global markets,

newcomers to online exporting have greater opportunities to grow faster and survive longer.



The market share of new entrants on eBay grows faster than offline businesses: after five years, newcomers on **eBay have a much higher combined market share (22%) than do new offline businesses (13%).**



Newcomers on eBay are on track to become established players within a few years: sellers who registered in 2006 have in 2010 reached a combined market share of almost 8%, not far below the combined market share of established sellers (10%).

In the Asia-Pacific region, sellers who registered in 2010 have a combined market share of almost 15%, which is also not far below the combined market share of more established sellers who registered in 2006 (18%).

>71%

Small and large sellers have high, and fairly equal, survival rates on eBay: the largest 10% of **“commercial sellers” have a 71%** chance of surviving the first five years, while the smallest 10% have a 54% chance. Offline businesses have a survival rate of just 24%.

We can conclude that online marketplaces such as **eBay offer better growth opportunities for new entrepreneurs.**

FASTER GROWTH

In both online and offline markets, there is significant turnover among sellers. In any given year, a large proportion of businesses are newcomers which did not exist the previous year. Likewise many businesses exit each year. New entrants are typically smaller than established businesses.

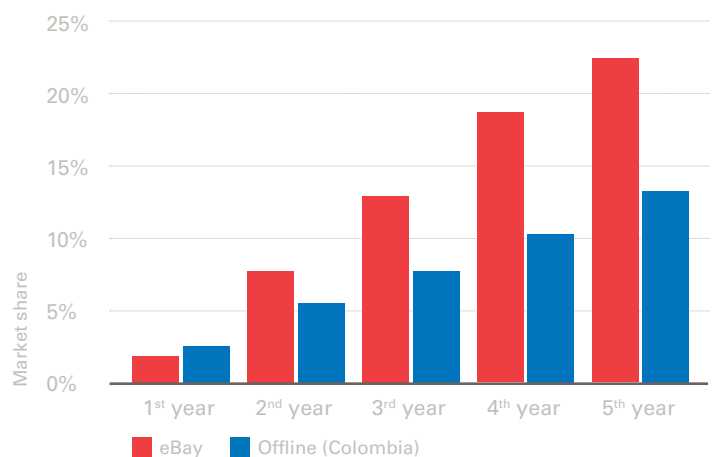
One paper that has studied this issue is Eaton *et al.* (2007).³⁰ The authors secured access to unique data on Colombian exporters that allowed them to track these businesses over ten years. Their research concluded that, on average, 25% of offline businesses in a given year are new entrants. However these new businesses only account for 2% of exports, and export 20 times less than established businesses.

Comparing the overall market share of offline and online newcomers over time demonstrates that the market share of new entrants on eBay grows faster. After five years, new sellers on eBay have a much higher combined market share (22%) than do offline businesses (13%). Figure 8 presents the combined market shares of new entrants on eBay and offline (in Colombia) as they develop over the course of their first five years.

Another way of showing the strong growth of new entrants on eBay is by presenting their development over time (in terms of market share). Figure 9 compares eBay sellers that registered in the same year, demonstrating that newcomers fairly quickly catch up with established sellers.

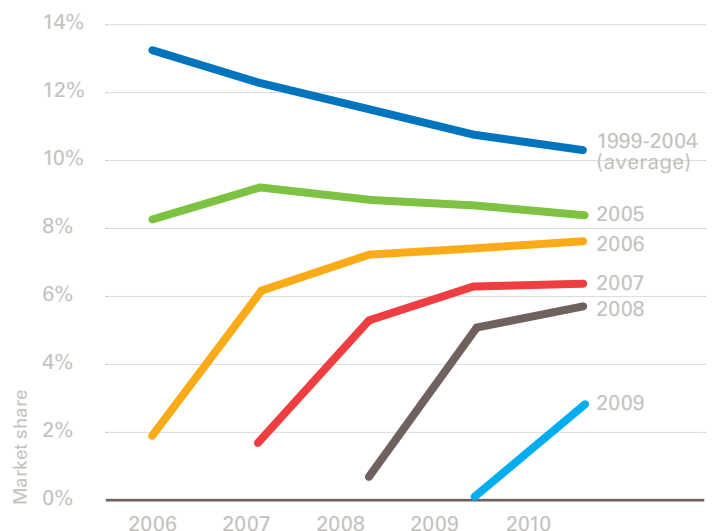
Each line in Figure 9 represents a group of sellers that registered in the same year and tracks their combined market share over the period 2006-2010. For example, in 2006 the market share of those sellers that had registered in 2005 was 8%, and the market share of 2006 registrations was 2%. The market share of established sellers shrinks over time, while the shares of new sellers increase. For example, in 2010, sellers who registered in 2006 reached a combined market share of almost 8% within four years, not far below the average combined market share of fully established sellers.

FIGURE 8: MARKET SHARES OF NEW SELLERS – ON EBAY VERSUS OFFLINE



Source: eBay – data for 2006-2010 (all sellers). Colombia: Own calculation based on Eaton *et al.* (2007, Table 8). The graph shows the combined market shares of all sellers/businesses that enter (register on eBay) in the first year or later. For eBay, first year refers to 2006. For Colombia, the figures are based on an average of five different five-year periods (1997-2001 to 2001-2005). Example: All eBay sellers that started in the first year or later have a combined market share of 22% in the fifth year. For offline businesses, they reach only a market share of 13%.

FIGURE 9: MARKET SHARES OF NEW VERSUS ESTABLISHED EBAY SELLERS



Source: eBay – data for 2006-2010 (all sellers). Example: The 2007 cohort (all sellers that registered in 2007) reached a combined market share of just under 2% in their first year (2007) and of just over 6% in 2010. Their market share in 2006 was by definition zero.

³⁰To our knowledge, such data is not available for US businesses, or any other country.

Figure 9 thus shows that within a few years, eBay entrants reach market shares close to those of established sellers. In other words, on eBay, new entrants become established players within a few years.

eBay data shows that this is also the case in the Asia Pacific region. For example, sellers who registered in 2010 have a combined market share of almost 15%, also not far below the combined market share of more established sellers who registered in 2006 (18%).



Yuji Matsumoto

BOOMING VINYL TRADE IS SWEET MUSIC FOR YUJI

Tokyo-based Yuji Matsumoto began selling second-hand vinyl records on a Japanese auction site in 2001. Just over a year later he decided to list Maximum Rare on eBay's US and Canadian sites – and his business has taken off.

In June 2012, his monthly sales were US\$61,663, a 100% increase on the previous June. And things continue to look up. Little wonder he's aiming to grow his business by 60% in the next year.

"I have tried other ecommerce platforms, but I mostly depend – 99% – on eBay," he says. "It enables me to connect with a huge market and brings huge opportunities."

Yuji attracts much interest from Europe. Japan is famous for high-quality and rare vinyl and CD pressings. These are highly sought after by music fans and collectors around the world.

To retain this interest and continue his growth trajectory, he needs to find other best-selling genres or artists, he says.

The most important aspect of business for a seller like Yuji who handles so many transactions each month, is maintaining his top seller status. To be successful, sellers need to win and maintain the confidence of buyers always. Just one dispute can impact a top seller rating, and cash flow, Yuji points out. To avoid jeopardizing his ratings he always provides refunds or accepts returns.

"I can recommend eBay with 100% confidence for sellers who take care of their customers," he says.

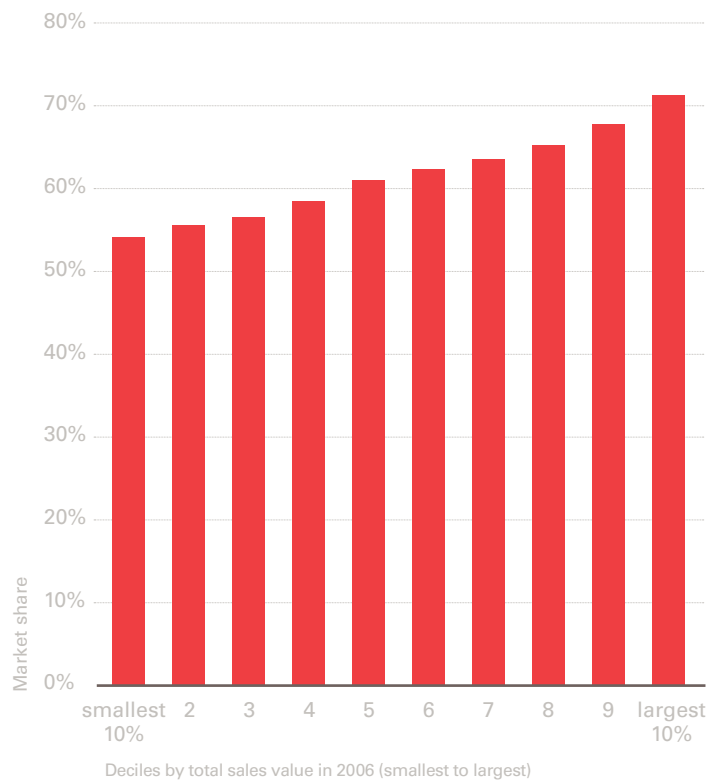
SUCCESSFUL GROWTH

Both offline and on eBay, there is a large fluctuation of sellers. New businesses enter, others leave the market. Yet the offline data for Colombian businesses indicates that only 24% of first-year entrants remain active after five years. Comparing that with eBay shows that of all US "commercial sellers" active in 2006, 61% are still active in 2010.³¹

Do small sellers have the same chance to survive as large sellers on eBay? Figure 10 below demonstrates that smaller commercial sellers in 2006 indeed have a slightly lower chance of surviving the subsequent five years (54% remain active after five years, compared to 71% of the largest commercial sellers). However, the difference in survival rates between the smallest and largest commercial sellers is relatively small (only a 17% difference).

The propensity of technology enabled commerce to encourage faster and more sustained growth for SMEs is exciting for the Asia Pacific, primarily because of the large number of people employed by SMEs. SMEs employ up to 60% of the workforce in the Asia Pacific region³², which makes their sustained growth and success crucial to both social stability and economic welfare in the region.

FIGURE 10: **SHARE OF SELLERS REMAINING ACTIVE AFTER FIVE YEARS – SMALL VERSUS LARGE SELLERS ON EBAY**



Source: eBay – data for 2006-2010 (all sellers with sales of at least USD 10,000 in 2006). Example: Out of the smallest (largest) 10% of sellers in 2006, 54% (71%) are still active in 2010.

³¹ We only consider sellers with sales of at least USD 10,000 in 2006. However, we still consider them as active sellers if their sales drop below that threshold in 2010.

³² Source: Asia Pacific Economic Cooperation

BENEFITING CONSUMERS AND ECONOMIES

Welfare gains are analyzed in the following three scenarios:

- 1** A move from a “closed economy” closed to international online trade (“closed economy”) to an economy open to cross-border eBay trade would **increase consumer welfare in a country by on average 77.5%** of the amount currently spent online. The largest gains from open online trade would accrue to developing countries.
- 2** Consumers experience an **increase in real income currently spent online by, on average, 42%** as a result of *transacting on eBay instead of via offline channels*. Again, the largest actual welfare gains from lower trade costs occur in developing countries.
- 3** If consumers worldwide *conducted all their international transactions on eBay* instead of offline, **the average increase in real GDP would be 15.6%**. The largest welfare gains would accrue to small, open and export-oriented countries.

>77.5% 42% 15.6% 

**Lower trade costs
translate to consumer
welfare gains.**



These welfare gains are largely driven by the fact that online trade costs are significantly lower than offline trade costs. Hence, moving trade online can increase welfare.

We do not suggest that all trade can or should be moved online. These estimates merely indicate the benefits of moving in the *direction* of these scenarios. They point to the upper limits of the welfare gains that may accrue from such a move, which in turn could help guide policy choices.

We can conclude that **policy regimes that actively promote online trade have the potential to create significant welfare gains** for consumers worldwide, in particular for developing countries.



LOWERING TRADE COSTS, INCREASING WELFARE

This report has shown that online marketplaces such as eBay bring down trade barriers, allowing consumers and merchants engage in cross-border transactions more easily and efficiently.

Lower trade costs allow consumers to gain access to products that they otherwise would be unable to purchase. Moreover, lower trade costs allow consumers to enjoy products that they were already purchasing at lower prices. Both scenarios increase the real income of the consumer. With the same nominal income, a consumer can now purchase more goods at lower prices – increasing the consumer’s welfare.

Sidley’s study estimates the consumer welfare associated with such lower trade costs on eBay (“welfare gains”). It assesses the effect of three distinct “shocks” on each of the 62 countries in the dataset:

- 1 The “shock” when a country moves from being a closed economy to one that is open to cross-border trade on eBay.
- 2 The “shock” when higher offline trade costs are applied to eBay transactions.
- 3 The “shock” when consumers face lower eBay trade costs for their international transactions.

SHOCK 1 GAINS FROM OPENING UP TO ONLINE TRADE

On average, a move from a closed economy (i.e. only domestic online trade) to one in which there is eBay cross-border trade would boost welfare by a remarkable 77.5%, based on that part of income that is currently spent on eBay purchases. Such “welfare” refers to the estimated increase in real income achieved when a closed economy opens up and allows sellers and buyers to engage in cross-border online transactions. The overall gain, say compared to GDP, is because currently consumers spend only a portion of their income online. Nevertheless, this number demonstrates the immense potential in electronic commerce that consumers can tap in future.

Importantly, as illustrated by Figure 11, the results show that opening up commerce to online cross-border trade provides the most benefits to developing countries.

FIGURE 11: GAINS FROM OPENING UP TO ONLINE INTERNATIONAL TRADE AND GDP PER CAPITA

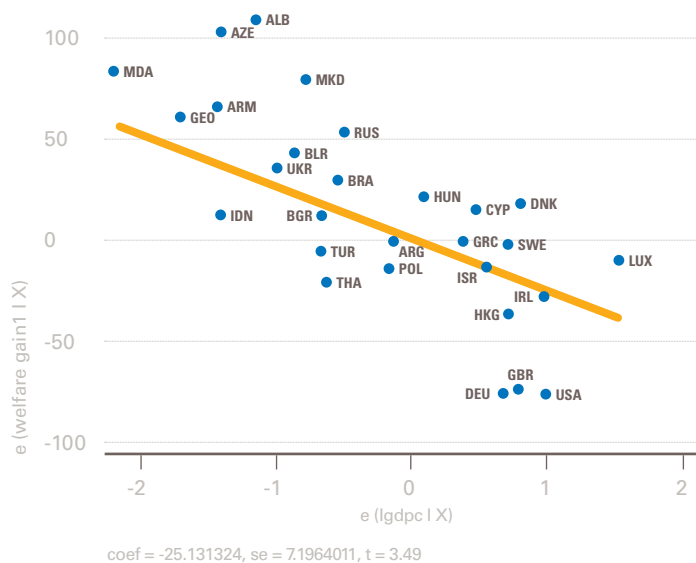


Figure 11 illustrates the correlation between the measured welfare gain and the log of GDP per capita. The downward sloping trend line shows that the poorest countries (on the left side of the graph) experience the largest gains when moving from a “closed economy” to international online trade.

³³ For details on the methodology used to estimate welfare gains see Annex.

SHOCK 2 GAINS ENJOYED BY CONSUMERS ON EBAY

Sidley's study models what would happen if all eBay trade occurred at higher offline trade costs. Under this scenario, customers would suffer welfare losses of on average 42.5% on income spent on eBay.

Figures for the hypothetical loss are at the same time indicate the actual welfare gains to be made by trading through eBay. eBay users benefit from significant welfare gains by transacting online instead of offline which has higher trade costs.

Again, the findings show a strong negative correlation between welfare gains and per-capita GDP. Figure 12 demonstrates how the poorest countries accrue the largest welfare losses. Conversely, the largest actual welfare gains from lower eBay trade costs occur in the poorest countries. This can be explained by the fact that offline trade costs are higher in developing countries, whereas, online, these costs are similar to those of developed countries. Hence developing countries can gain more when moving online, or can lose more from moving from online to offline trade.

FIGURE 12: CORRELATION BETWEEN LOSSES IN REAL INCOME FROM TRADING OFFLINE AND GDP/CAPITA

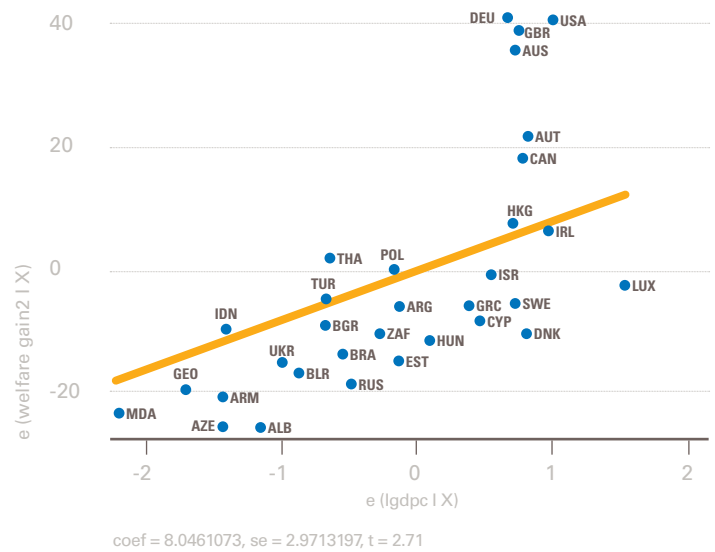
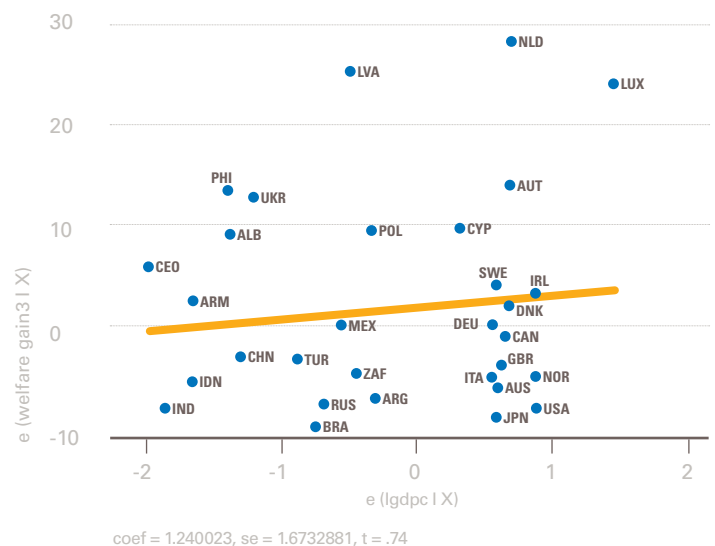


Figure 12 demonstrates that the largest welfare losses occur for the poorest countries (on the left side of the graph) for a hypothetical move from eBay trade to offline trade.

FIGURE 13: GAINS IN REAL GDP FROM ADOPTING ONLINE TRADE COSTS AND LOG OF GDP PER CAPITA³⁴



³⁴ Note that welfare gains are always positive. The vertical axis shows how welfare gains deviate from average gains, but gains are positive across the board, even for countries with the lowest welfare gains (such as Brazil and Japan).

SHOCK 3

GAINS FROM SWITCHING TO ONLINE CHANNELS

Finally, Sidley's study models a scenario in which all international offline transactions occurred at the lower eBay trade costs. This represents the welfare not yet reaped by consumers because they transact offline instead of online. Of course this report does not argue that all trade can or should become eBay trade – but if the upper limits of potential gains are significant enough then moving in the direction of more online trade is likely to benefit the world economy.

The hypothetical welfare gains to be made from switching to online channels are hugely significant. If consumers worldwide conducted their trading subject to estimated online trade costs instead of at offline trade costs, average real income (GDP) would increase by a remarkable 15.6%.

Figure 13 below plots the distribution of these gains. The biggest welfare gains appear to accrue to small, open and export-oriented countries.³⁵ All countries benefit from increased online commerce, but smaller economies that are open to trade and seriously engaged in exporting will benefit most.

³⁵ Evidently, countries that trade more (relatively to their GDP) also stand to gain more (again, relatively to their GDP), once trade costs decrease.



Ben Yip

EBAY OFFERS US ACCESS TO A HUGE GLOBAL MARKET'

Ben Yip, founder of MillionTop, believes his company largely owes its success to eBay. It sells 70% of its products via eBay, and 20% to 30% of these purchases are made via mobile phones, a trend he expects to escalate.

Based in Hong Kong, MillionTop mostly sells watches, along with some jewellery lines, and since 2008 has also been selling its own custom-designed Shark watch. Hundreds of thousands of Shark timepieces have been sold on eBay since then.

"eBay provides a lot of support and ready-made tools to help us upload listings swiftly, making it easier for customers to locate items," says Ben. "Also PayPal is securely connected so we never have to worry about receiving money for our goods."

Ben particularly appreciates the attention eBay pays to resolve disputes. It has an excellent mechanism in place to resolve buyer/seller differences, he adds.

Moreover it routinely promotes MillionTop products in various regions with "daily deals" and similar programs.

Most of all, Ben is grateful that eBay offers access to a huge global market that allows his company to sell 24 hours a day, every day.

Despite the global financial crisis, the US remains MillionTop's number-one market, while Russia and Brazil are growing rapidly.

"Logistics remain a great challenge," concedes Ben, who believes one way to meet consumer expectations is to establish warehouses in local regions. "We're learning all the time and we'll continue to upgrade our commitment to higher product quality, improved customer service and better, faster delivery options."

CONCLUSIONS

This report tells the story of what can be achieved to expand and open up world trade if countries and policymakers establish an online marketplace where merchants, irrespective of size and provenance, can compete; provide a global payment system; and develop trust mechanisms that facilitate communication, dispute resolution, and clarity on rights and obligations.

The picture that emerges from Sidley's study is one in which online marketplaces, such as eBay, are turning global trade into everyday commerce – an activity in which consumers and merchants of all sizes comfortably engage. The opportunity for small enterprises to compete and succeed on equal footing with larger businesses is exciting for the SME-rich Asia Pacific.

The Internet and new technologies allow sellers to overcome traditional barriers to trade and find customers. We are witnessing a fundamental shift. World trade is no longer an abstract concept or remote activity exclusive to the largest businesses or countries. Consumers and merchants can connect and establish trust on the global stage despite traditional trade barriers. As the Asia Pacific looks to continue its focus on international trade, the finding that technology-enabled commerce facilitates global trade should be of particular interest to the public and private sectors alike.

The study shows that there are very large potential gains for consumers, developing countries, and exporters and importers of all sizes to be made from an increase in online trade. Policy choices that encourage and facilitate online trade should be pursued actively in the context of trade and development policy agendas.

We wanted to share our findings with a wider audience through this report. We believe they offer valuable fresh insights and a solid basis for understanding the potential impact of technology-enabled commerce on trade and development, with benefits for all. The intersection of technology and commerce is a fast-moving area, so we are likely to see ever-more efficient channels and methods for connecting consumers and traders worldwide in the near future.

To summarize our findings once again: online trade represents a growth opportunity for businesses of all sizes and is an important tool through which countries can gain access to world markets.

The potential is immense.

METHOD: DISTANCE

The empirical methodology used for this study follows the well-known “gravity” explanation for international trade flows. The gravity model is the “workhorse” tool of international trade economists, and fits well with data on actual trade flows. It has several theoretical explanations in international trade, but its origin can be linked to Newton’s gravity theory that stipulates that the force between two masses depends on the size of those masses and the distance between them, as well as the gravitational constant. The international trade version suggests that international trade flows between two countries will depend on their economic size (GDP) and the distance between them, but also on other trade-related factors. The model is widely used to identify such other factors.

In the case of international trade, the trade-reducing impact of “geographic distance” – more distant countries usually trade less with each other – is used as an approximation for “trade costs”. In addition to distance, one often includes other factors that reflect the overall degree of trade frictions between countries, such as transportation costs, whether countries share a common language or a common border, or whether they have signed a trade agreement between them.

This model allows us to explain why some countries trade more with each other, and why others do not trade at all. It posits that, everything else being equal, countries trade more with each other the larger they are, and the smaller is the distance between them. Combined with other indicators, such as common language, common border, mutual trade agreements, or socio-historical relationships, the model can explain a large part of actual global trade flows. We control for each country’s specificities and idiosyncrasies, which means that the model is not trying to explain, for example, the amount of imports or exports of individual countries, but rather how trade flows are spread across their trading partners. The model then allows us to estimate the statistical effect of an increase in distance, say by 1%, on the volume of trade between any two countries.

Apart from the customary datasets used for implementing the gravity model (distance coefficients, geographic factors, GDP, trade data, cultural and sociological data, institutional indices, etc.), we used eBay dataset. This contains aggregated bilateral trade flows between 69 country pairs in the period 2004-2009. These countries represent more than 90% of offline world trade. The eBay dataset contains information on trade values and volumes and shipping costs in the 29 product categories. The dataset also contains information on trade flows generated by specific eBay sites, power seller status, and B2C/C2C commerce.

In order to compare trade on eBay with offline trade flows, we compiled an offline dataset in which we matched the 29 product categories with the corresponding product categories in the Harmonized System (“HS”) classification at the six-digit level. Since HS-six digit offline trade flows are available from the United Nation’s Comtrade database, we were able to compile an offline dataset that we termed the “Comtrade eBay image”. As the name suggests, the Comtrade eBay image replicates offline trade between the same countries in the same product categories over the same time period of observation as the eBay data collected.

METHOD: WELFARE GAINS

Previously, it was a daunting task to estimate overall welfare gains reaped from international trade. Fortunately, Arkolakis *et al.*, in a paper published in the *American Economic Review*, a top-ranked economic journal, describe a very general way to measure different types of welfare gains associated with trade.³⁶

Our modelling approach is based on the Arkolakis *et al.* paper. In essence, following Arkolakis *et al.*’s approach, we examine every country in the dataset individually, and assess the effect of three distinct “shocks” on its welfare (measured in real eBay or total income):

i **Welfare gains 1 – gains from online cross-border trade.** Here, we estimate the increase in real income achieved from trading internationally on eBay, i.e., from allowing sellers and buyers in different countries to engage in cross-border trade. The policy “shock” we consider is a move from online autarky (*i.e.*, having only domestic and no international online trade) to liberalized trade online. The result is the welfare gain for a country completely isolated from online trade that opens up to cross-border trade on eBay.³⁷

ii **Welfare gains 2 – imposing offline trade costs on actual eBay trade.** Here, we compare the importance of distance, common language, common border, and other trade cost variables on international trade flows (offline and online). We “shock” international online trade by applying offline trade costs to online transactions.

Trade frictions online are smaller than frictions offline. In this scenario, we assume that eBay trade would be conducted the same way as “offline trade” is currently conducted. This means that there would be more frictions for online trade, and thus a welfare loss. We estimate this welfare loss, which can be also interpreted as the welfare gain that consumers have achieved by trading through eBay instead of through offline channels with higher trade costs.]

iii **Welfare gains 3 – assuming online trade costs for offline trade transactions.** Here, we shock the system by supposing that consumers face online trade costs for all their trade transactions. The result is the welfare potential not yet reaped by consumers, because they are not using eBay as their trade channel but instead mostly relying on offline channels.

To estimate the welfare gains in each country contained in our dataset, we use the formula central to the Arkolakis *et al.* paper. To implement this formula we used the following information:

- a Trade elasticities (changes in imports following a change in *ad valorem* trade costs).
- b Share of imports in total expenditure before the shock.
- c Share of imports in total expenditure after the shock.

Trade elasticity estimates are taken from the existing trade literature. Changes in imports before and after a certain shock are mathematically derived from our econometric estimates, which are based on the eBay dataset and publicly available UN Comtrade data for offline trade.

³⁶ New Trade Models, Same Old Gains? (with A. Costinot and A. Rodriguez-Clare). *American Economic Review*, 2012, 102(1), 94-130. Although we are not able to disentangle the exact channels through which these gains occur, the approach taken by Arkolakis *et al.* provides an overall estimate of welfare gains afforded by eBay thanks to the trade-creating nature of the e-commerce platform. To put it simply, Arkolakis *et al.* show that the overall welfare gains are unchanged when we add different channels (as long as some basic modeling assumptions are kept, and these are satisfied in our gravity setup).

³⁷ Imagine the situation of a least-developed country (say East Timor or Central African Republic) that engaged in very little international online trade, but was provided with the chance to trade online through eBay. The welfare gain here would be a combination of a) gains from trading with other nations, and b) being able to trade with low trade cost, thus reaching more customers and being able to offer lower prices.

