



U.S. SME Access and Use of Digital Tools

U.S.-E.U. Trade and Technology Council
SME Working Group
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Office of Advocacy, U.S. Small Business Administration

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To: Department of Commerce

The U.S. Small Business Administration Office of Advocacy (Advocacy) is pleased to present this Trade and Technology Council (TTC) Small Business Access to Digital Tools report. This report was prepared by Advocacy at the request of the U.S. Department of Commerce International Trade Administration.

The United States (U.S.) and European Union (E.U.) have the largest bilateral trade and investment relationship and enjoy the most integrated economic relationship in the world. In June 2021, President Joe Biden, European Commission President Ursula von der Leyen, and European Council President Charles Michel established the U.S.-E.U. TTC. The TTC was designed to help the U.S. and E.U. coordinate their approaches on new technologies. Further, the TTC reaffirms U.S-E.U. objectives on coordinating approaches to key global technology, economic, and trade issues; deepening transatlantic trade and economic relations; and basing policies on shared democratic values.

The Department of Commerce International Trade Administration leads the Small and Medium-sized Enterprises (SME) Working Group, which focuses on promoting SME access to and use of digital technologies. This report contains information on small business uptake of digital technologies. Advocacy conducted the outreach that culminated in this report on behalf of the TTC SME working group. We continue to be committed to small business outreach and using our resources to help level the playing field for small business in international trade.

A handwritten signature in black ink that reads "Major L. Clark, III". The signature is written in a cursive style with a distinct flourish at the end.

Major L. Clark, III
Deputy Chief Counsel for Advocacy

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Chapter 1: Introduction

TTC overview

In June 2021, President Joe Biden, European Commission President Ursula von der Leyen, and European Council President Charles Michel established the U.S.-E.U. Trade and Technology Council (TTC). The TTC was designed to help the U.S. and E.U. coordinate their approaches on new technologies. Further, the TTC reaffirms U.S.-E.U. objectives on coordinating approaches to key global technology, economic, and trade issues, deepening transatlantic trade and economic relations, and basing policies on shared democratic values. Various working groups were formed to support these initiatives. The Department of Commerce (Commerce) leads the Small and Medium-sized Enterprises (SME) Working Group, which focuses on promoting SME access to and use of digital technologies. The Office of Advocacy (Advocacy) conducted the outreach that culminated in this report on behalf of the TTC SME working group.

Office of Advocacy Overview

The Office of Advocacy of the U.S. Small Business Administration (SBA) was created by Congress in 1976 to be an independent voice for small business within the federal government. The office is led by the Chief Counsel for Advocacy, who is appointed by the President and confirmed by the U.S. Senate. The Chief Counsel advances the views, concerns, and interests of small business before the White House, Congress, federal agencies, federal courts, and state policymakers. The office relies on economic research, policy analyses, and small business outreach to identify issues of small business concern. Ten regional advocates around the country and an office in Washington, D.C., support the Chief Counsel's efforts.

Advocacy uses its research and regulatory experience to increase small businesses' participation in international trade. The office represents U.S. small businesses in policy development to lower regulatory barriers that impede small business involvement in international trade. Advocacy also works to enable greater consideration of small business issues during negotiations of international trade agreements.

Purpose of Report and Process Overview

Between March and September 2022, Advocacy hosted a series of outreach meetings to speak directly with small businesses. Advocacy invited small business stakeholders through announcements on its listserv and website. Program offices within the U.S. Small Business Administration and other federal agencies also promoted the meetings on their websites and listservs. Advocacy invited the working group members and representatives from their agencies to attend these meetings, as well as representatives from offices within the SBA.

Advocacy's network of regional advocates, alongside SBA District Offices, assisted with small business outreach to increase attendance and participation at the events.

Working group members participated when possible. Outreach meetings included an introduction to Advocacy and the working group, an overview of the goals of the meeting, and an open forum for small businesses to offer their views on the relevant issues in scope of this report. All participants were also encouraged to submit written comments.

Three outreach meetings were held to hear from small businesses on their access to and use of digital technologies:

- Virtual (March 23, 2022)
- Durham, New Hampshire (June 17, 2022)
- Seattle, Washington (September 13, 2022)

In addition, Advocacy met with individual small business owners and staff, hosted conference calls, and made site visits to small businesses to further explore the concerns of specific industries. The purpose of the listening sessions with SMEs and underserved communities, as well as the resulting analysis and reporting, is to develop recommendations for U.S. and E.U. policymakers to implement that will help accelerate SME access to and the uptake of digital technologies.

Chapter 2: SME Digital Technology Access and Utilization

Overview of Digital Tools

Small businesses are important sources of growth in the U.S. economy, making up most businesses, employers, and exporters, and creating two-thirds of net new jobs.¹ Digital technology has opened up opportunities for small businesses to grow beyond their local and domestic markets to reach international customers. However, small businesses face challenges when adopting new emerging technology. Because of these challenges, governments have focused on increasing adoption and use of digital technology for small businesses to accelerate their growth and contributions to the economy.

In recent decades, digital tools have transformed how firms conduct business. While small businesses have realized some gains from adopting new technologies, they generally lag larger businesses in the use of digital tools and continue to face barriers to digitalization.

Digital tools include a wide range of technologies. There is not a standard list of “digital tools,” and most researchers and data collection organizations focus on the tools they think are most important. The Census Bureau has collected data on artificial intelligence, cloud-based technologies, robotics, specialized equipment, and specialized software. The Organisation for Economic Co-operation and Development (OECD), an organization representing 38 member countries of developed economies, has tracked data in its reports on social media, customer relationship management, electronic invoicing, cloud computing, radio frequency identification, e-commerce, high-speed broadband, supplier-customer management, big data, e-booking and orders, business-to-government (B2G) interactions, and enterprise resource planning.

In 2019, OECD released *Measuring the Digital Transformation: A Roadmap for the Future*, which illustrates a path to track the progress of digital technologies across nations.² Continuing with this theme, in March 2021, OECD released *The Digital Transformation of SMEs*.³ This latest report finds businesses increasingly turning to digital tools in response to changes in the marketplace brought on by shocks related to the COVID-19 pandemic. However, small firms are transitioning to the digital world at a slower pace than larger firms. The report identifies

¹ Office of Advocacy, U.S. Small Business Administration. *Frequently Asked Questions About Small Business*. December 2021, <https://advocacy.sba.gov/2021/11/03/frequently-asked-questions-about-small-business-2021/>.

² OECD (2019), *Measuring the Digital Transformation: A Roadmap for the Future*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264311992-en>.

³ OECD (2021), *The Digital Transformation of SMEs*, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, <https://doi.org/10.1787/bdb9256a-en>.

three areas to be studied and three barriers to small businesses incorporating more digital solutions. The areas are tools, security (such as protecting trade secrets and cyber threats), and platforms, while the barriers are infrastructure, financing, and worker skills. The OECD believes that governments can play a role in reducing these barriers.

Benefits of Digitalization for SMEs

Researchers have found that digital technology adoption generally increases productivity.⁴ OECD research finds that increases in platform traffic may increase productivity more for small firms than for large firms, with the largest effect on firms with fewer than 10 employees.⁵ These productivity gains can increase or help maintain small business competitiveness in domestic and international markets.

The OECD recently shifted much of its research focus to the digital world. The OECD draws from data on small businesses across member developed countries. Although not U.S. focused, the OECD's broad view of commerce makes them one of the best information sources on digital trends and the benefits of technology for small business. The OECD has highlighted small business technology benefits such as:

- A reduction in transaction and information costs
- An increase in access to resources, including financing
- More robust data analytics to identify opportunities and drive performance
- Facilitates remote work, which can increase productivity, reduce costs, and increase access to talent

Technology adoption may also increase access to trade opportunities for small businesses. Digitization can help small businesses better integrate into global markets “through reductions in costs associated with transport and border operations” and “significantly enhances the scope to trade services.”⁶

Small Business Adoption of Technologies

Small business use of digital tools has grown in recent years and accelerated during the pandemic. According to the Census Bureau's Small Business Pulse Survey, about 28% of American small firms reported that they expanded their use of digital technologies between

⁴ Goldfarb, A. and C. Tucker (2019). “Digital Economics.” *Journal of Economic Literature*, 57(1), p. 29. <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jel.20171452>.

⁵ Costa, H., et al. (2021), "Are online platforms killing the offline star? Platform diffusion and the productivity of traditional firms," *OECD Economics Department Working Papers*, No. 1682, OECD Publishing, Paris, <https://doi.org/10.1787/1e2bbe10-en>.

⁶ OECD (2021), *The Digital Transformation of SMEs*, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, <https://doi.org/10.1787/bdb9256a-en>.

March 2020 and January 2021.⁷ However, small business technology adoption often lags that of larger businesses. For example, small businesses lag large businesses in adopting all technologies included in the OECD Access and Usage data. This gap puts small businesses at a potential disadvantage. Data from the Census Bureau’s Annual Survey of Entrepreneurs (ASE) indicates that a nontrivial percentage of small businesses are harmed by technological advances. In 2016, 16.7% of small businesses (500 or fewer employees) reported a negative impact to profitability from changes or updates in technology (Table 1). These figures were higher among the sectors most involved in international trade: 17.9% for manufacturing, 17.6% for wholesale trade, and 21.9% for retail trade.

Table 1: Percent of Small Businesses that Experienced a Negative Impact from Changes or Updates in Technology

Sector	Negative Tech Impact
All Private	16.7%
Manufacturing	17.9%
Wholesale Trade	17.6%
Retail Trade	21.9%

Source: U.S. Census Bureau 2016 Annual Survey of Entrepreneurs

In the U.S., small businesses have not widely adopted many tools that enable e-commerce across borders. According to a survey of small businesses by the Export-Import Bank and the National Small Business Association, fewer than half of the small business respondents’ websites could process international orders and most of their websites were not enabled for foreign language translation.⁸

The smallest businesses in the U.S. expect to expand their digital technology use at a lower rate than other small businesses. As of April 2022, about 14% of small businesses expected to adopt or expand use of digital technologies over the next six months. However, only about 11% of businesses with 1-5 employees expected to do so, compared with over 17% of businesses with over 20 employees.⁹

Many small businesses also seek advice on technology use and adoption. The ASE shows that about 9.9% of small businesses sought business advice or mentoring on technology or

⁷ U.S. Census Bureau. *Small Business Pulse Survey*. 2022, <https://www.census.gov/data/experimental-data-products/small-business-pulse-survey.html>.

⁸ National Small Business Association, Export-Import Bank of the United States. *2022 Small Business Exporting Survey*. June 2022, <https://grow.exim.gov/hubfs/resources/EXIM-NSBA-survey-2022.pdf>.

⁹ U.S. Census Bureau. *Small Business Pulse Survey*. 2022, <https://www.census.gov/data/experimental-data-products/small-business-pulse-survey.html>.

information technology in 2016 (Table 2). Among the three major trading sectors, this rate was 10.6% for manufacturing, 10% for wholesale trade, and 8.9% for retail trade.

Table 2: Percent of Small Businesses that Sought Business Advice on Technology/Information Technology

Sector	Sought Tech Advice
All Private	9.9%
Manufacturing	10.6%
Wholesale Trade	10.0%
Retail Trade	8.9%

Source: U.S. Census Bureau 2016 Annual Survey of Entrepreneurs

Barriers to Digital Tools

While research demonstrates the high value of digital tools for businesses of all sizes, small businesses face barriers to adopting these technologies. Some barriers are based on misunderstandings of the relevance, value, and risks of digital tools for small business. When small businesses do recognize the value of digital tools, they may lack the expertise necessary to adopt certain technologies or be unable to commit resources to searching for and implementing technologies. In either case, understanding the nature of these barriers can point to potential solutions.

Knowledge of Technology as a Barrier

Many small businesses fail to adopt digital tools because they lack knowledge about the options and benefits. A 2018 report by Deloitte found that some of the most common reasons small, low-tech businesses do not adopt digital tools are the beliefs that these tools are not relevant to the business, that they are not effective, or that the associated privacy and security risks are too high.¹⁰ A 2021 report by Xero found something similar.¹¹ Two of the three biggest behavioral patterns that limit small business technology adoption are uncertainty about the potential outcomes and an inability to compare different technology options. A 2020 business research paper by Al-Tit identifies technology knowledge as a primary factor

¹⁰ Deloitte. *Connecting Small Businesses in the United States*. 2018, <https://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/connected-small-businesses.html>.

¹¹ Xero. *One Step: Behavioral Barriers to Technology Adoption Amongst Small Businesses – and How to Overcome Them*. 2021, <https://www.xero.com/content/dam/xero/pdfs/resources/one-step/one-step-report-nov-2021.pdf>.

hindering e-commerce adoption among small and medium-sized enterprises.¹² OECD also identified lack of information and gaps in skills as barriers to adoption.¹³

Small Business Perceptions of Barriers

The Census Bureau's Annual Business Survey (ABS) provides some additional information about business beliefs regarding technology adoption. The survey asks a pool of mostly very small businesses (<10 employees) to indicate whether certain factors adversely affect the business's adoption of artificial intelligence, cloud-based technologies, specialized software, robotics, and specialized equipment. The survey respondents could select one or more barriers, including cost, maturity of technology, access or reliability of data, human capital, policies, safety concerns, capital access, inapplicability of the technology to the business, and none.

Table 3 illustrates that many businesses across multiple importing sectors either do not perceive any factors preventing their adoption of cloud-based technology or specialized software, or they believe that these technologies do not apply to their businesses. Fewer cite cost as a factor, while the other factors did not reach 10% for any industry. While the table omits artificial intelligence, robotics, and specialized equipment, the results are relatively consistent across all technologies.

¹² Al-Tit, Ahmad (2020). *E-commerce Drivers and Barriers and Their Impact on E-customer Loyalty in Small and Medium-sized Enterprises*. Business: Theory and Practice, Volume 21, Number 1, Pages 146-157, Vilnius Gediminas Technical University, <https://www.econstor.eu/bitstream/10419/248015/1/1700196405.pdf>.

¹³ OECD (2021), "SME digitalisation to "Build Back Better": Digital for SMEs (D4SME) policy paper", *OECD SME and Entrepreneurship Papers*, No. 31, OECD Publishing, Paris, <https://doi.org/10.1787/50193089-en>.

Table 3: Factors Affecting Adoption of Cloud-Based Technologies and Specialized Software for Manufacturing, Retail Trade, and Wholesale Trade

	Technology	No factors adversely affected the adoption of this technology	Technology not applicable to this business	Technology was too expensive
Manufacturing	Cloud-Based	52%	31%	9%
	Specialized Software	56%	27%	13%
Retail Trade	Cloud-Based	51%	35%	8%
	Specialized Software	54%	33%	10%
Wholesale Trade	Cloud-Based	55%	31%	8%
	Specialized Software	55%	32%	9%

Source: U.S. Census Bureau Annual Business Survey, 2018. Excludes factors that <10% of businesses selected.

Given the benefits of digital tools, we might expect that businesses facing no barriers would adopt these technologies. However, other ABS data indicate that a large fraction of businesses reporting no barriers to adoption are not using these technologies. For example, only 32.4% of businesses reported using cloud-based technology in any form while 55.3% reported no barriers to adoption.¹⁴ The difference is far greater for more complex technologies like artificial intelligence, where only 3% reported using the technology in any form while 43.1% reported no barriers to adoption. This implies that most small businesses believe that these technologies are either not applicable to their businesses or not beneficial for their businesses (since many claim to face no barriers but still do not adopt them). Combined with research showing that digital tools like these are very profitable investments for small businesses, ABS data provides further evidence that knowledge is a major barrier to digital tool adoption. In this case, the barrier is knowledge that the technologies are applicable and beneficial.

Resource Constraints and Other Barriers to Technology Adoption

Costs and capabilities are a more concrete barrier for many small businesses. Al-Tit found that, in addition to knowledge gaps, other factors such as telecommunications, technical expertise, technology cost, internet security, and legal barriers can all hinder e-commerce adoption. Al-Tit also found connectivity cost to be a major barrier, while the Deloitte study

¹⁴ U.S. Census Bureau. *Annual Business Survey*. 2018, <https://www.census.gov/programs-surveys/abs.html>.

found poor internet access to be the least cited among 11 potential barriers. Taken together, this would imply that broadband availability is not a major issue, but broadband cost may be. The Deloitte study also found that technologically advanced small businesses were more likely to cite internal technological limitations, such as inadequate expertise or lack of time to learn, as a reason for not adopting digital tools.¹⁵

Digital security risks also impact adoption of digital tools. Increased digitization means more potential cyberattacks, which small businesses may not be well prepared to manage. Small businesses in the OECD are less likely than large businesses to have a formal security policy.¹⁶ Small businesses may incur costs to comply with additional regulations related to data privacy and security when using digital tools to access foreign markets.¹⁷ Other factors, such as business culture, may also inhibit the adoption of new technologies. The Xero study found that resistance to change hinders small business technology adoption more than any other behavioral pattern. Ediriweera and Wiewiora, in a study of the mining industry, found that inadequate engagement with external stakeholders, uncertainties, and the cyclical nature of the sector are key barriers to innovation adoption.¹⁸

Drivers of Technology Adoption

In addition to barriers, many of these studies highlight drivers of technology and digital tool adoption. The Deloitte study identified increased sales and revenue, customer engagement, marketing, and recruiting as the main drivers. Al-Tit found the drivers of adoption to include customer preferences, e-commerce perceived value, partner readiness, e-commerce cost, technical expertise, customer trust, employee knowledge and experience, perceived ease of use, organizational culture, and top management support.¹⁹ Ediriweera and Wiewiora found the top technology adoption enablers in the mining industry to include learning culture, knowledge sharing, and external stakeholder engagement.²⁰

¹⁵ Deloitte. *Connecting Small Businesses in the United States*. 2018, <https://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/connected-small-businesses.html>.

¹⁶ OECD (2021), "SME digitalisation to "Build Back Better": Digital for SMEs (D4SME) policy paper", *OECD SME and Entrepreneurship Papers*, No. 31, OECD Publishing, Paris, <https://doi.org/10.1787/50193089-en>.

¹⁷ Whyte, Campbell (2018). "The General Data Protection Regulation: An Overview of Its Impact on European Society." *Trinity College Law Review*, <https://trinitycollegelawreview.org/the-general-data-protection-regulation-an-overview-of-its-impact-on-european-society/>.

¹⁸ Ediriweera, Amali & Wiewiora, Anna (2021) Barriers and enablers of technology adoption in the mining industry. *Resources Policy*, 73, Article number: 102188, <https://doi.org/10.1016/j.resourpol.2021.102188>.

¹⁹ Al-Tit, Ahmad (2020). *E-commerce Drivers and Barriers and Their Impact on E-customer Loyalty in Small and Medium-sized Enterprises*. *Business: Theory and Practice*, Volume 21, Number 1, Pages 146-157, Vilnius Gediminas Technical University, <https://www.econstor.eu/bitstream/10419/248015/1/1700196405.pdf>.

²⁰ Ediriweera, Amali & Wiewiora, Anna (2021) Barriers and enablers of technology adoption in the mining industry. *Resources Policy*, 73, Article number: 102188, <https://doi.org/10.1016/j.resourpol.2021.102188>.

Technology Use by Owner Demographic

Exploring technology use by business owner demographic can reveal gaps that may represent barriers to further business growth for certain groups. E-commerce allows firms to operate online, improve connectivity, and boost international trade efforts. According to Table 4, the total number of employer firms that reported using e-commerce in 2016 was 423,440, which made up 12.2% of all reporting employer firms. Women-owned business used e-commerce at a higher rate (12.1%) than men-owned businesses (11.7%). Businesses equally owned by both men and women use e-commerce at an even higher rate (13.1%). Racial demographic statistics show that white-owned firms used e-commerce at a higher rate (12.4%) than did firms owned by other racial groups. Only 8.2% of Hispanic-owned businesses and 8.3% of African American-owned businesses used e-commerce. Asian-owned firms reported a slightly higher e-commerce use rate at 9.7%.

Table 4: E-Commerce Use by Owner Demographic

Owner Demographic	Number of Firms	Percent of Firms Using E-Commerce
All Firms	423,440	12.2%
Male	254,378	11.7%
Female	87,002	12.1%
Equally Male/Female	67,348	13.1%
Hispanic	15,569	8.2%
White	366,075	12.4%
African American	5,147	8.3%
American Indian/Alaskan Native	2,140	11.9%
Asian	31,187	9.7%
Native Hawaiian/ Other Pacific Islander	358	10.0%
Some Other Race	3,650	7.2%
Minority	55,252	9.2%
Equally Minority/Nonminority	7,518	14.6%
Nonminority	345,958	12.6%
Veteran	27,741	11.3%

Source: U.S. Census Bureau 2016 Annual Survey of Entrepreneurs

Business owners may be limited to specialized software for purposes of product innovation, marketing, and safety. According to Table 5, the total number of employer firms that reported using specialized software was about 1.8 million, which made up 38.3% of all reporting employer firms. About 38.4% of women-owned firms used specialized software. About 39.4% of white-owned firms used specialized software, while 34.4% of Hispanic-owned firms and 37% of African American-owned firms did so. Asian-owned firms had a much lower specialized software usage at 27.6%. On the other hand, American Indian and Alaskan Native-owned firms had the highest rate of specialized software use at 41.5%.

Table 5: Specialized Software Use by Owner Demographic

Business Owner Demographic	Number of Firms	Percent of Firms
All	1,821,368	38.3%
Male	1,160,834	38.9%
Female	374,451	38.4%
Equally Male/Female	263,467	35.4%
Hispanic	90,843	34.4%
White	1,625,573	39.4%
African American	34,059	37%
American Indian/Alaskan Native	8,832	41.5%
Asian	129,937	27.6%
Native Hawaiian/Pacific Islander	1,547	28.5%
Minority	260,899	31.1%
Equally Minority/Nonminority	31,252	44.0%
Nonminority	1,506,599	39.7%
Veteran	115,027	38.9%

Source: U.S. Census Bureau Annual Business Survey, 2018.

Cloud-based computing for small businesses have been rapidly growing. According to Table 6, the total number of employer firms that reported using cloud-based computing was about 1.6 million in 2018, or about 32.4% of reporting employer firms. About 33.9% of women-owned firms used cloud-based computing. White-owned firms had an above-average rate of cloud-based computing usage with 33.3%. The highest rate among racial groups was African American-owned businesses with 35.5%. In contrast, only 29.6% of Hispanic-owned

businesses used cloud-based computing. Asian-owned firms reported an even lower usage rate at about 22.8%.

Table 6: Cloud-Based Computing Use by Owner Demographic

Demographic	Number	Percent
All	1,550,716	32.4%
Male	980,195	32.6%
Female	332,948	33.9%
Equally Male/Female	217,187	29.0%
Hispanic	79,018	29.6%
White	1,381,707	33.3%
African American	33,078	35.5%
American Indian / Alaskan Native	7,206	33.6%
Asian	107,331	22.8%
Native Hawaiian / Other Pacific Islander	1,572	28.8%
Minority	224,380	26.5%
Equally Minority/Nonminority	27,405	38.3%
Nonminority	1,278,545	33.4%
Veteran	92,113	30.9

Source: U.S. Census Bureau Annual Business Survey, 2018.

According to the National Science Foundation, most firms adopted cloud computing by indicating digitalization of at least one business function and purchase of at least one cloud computing service.²¹ Cloud computing played a vital role for billing within financial functions of firms. Cloud services for digital security followed cloud computing for most adopted.

There are various reasons for using cloud-based computing and specialized software. These technologies automate tasks performed by labor, upgrade outdated processes, improve

²¹ Wojan, TR (2022). National Center for Science and Engineering Statistics (NCSES). *Digitalization, Cloud Computing, and Innovation in U.S. Businesses*. Working Paper NCSES 22-213. Alexandria, VA: National Science Foundation. <https://ncses.nsf.gov/pubs/ncses22213/>.

quality or reliability, expand the range of goods or services, and adopt standards and accreditation.

Sectors that have integrated technology utilization for international trade include manufacturing, retail, and wholesale trade. Cloud-based computing was used by 29.1 percent of employers in manufacturing, 23.7 percent of employers in retail trade, and 30.7 percent of employers in wholesale trade. In contrast, specialized software was used by 41.9 percent of employers in manufacturing, 30.7 percent of employers in retail trade, and 32.5 percent of employers in wholesale trade. Overall, industries with high technology utilization include finance and insurance, professional services, and health care.²²

Even though digitalization may benefit small firms, there is a lack of digital tools among small business exporters. Most exporters are larger and more capable of purchasing digital tools than their smaller counterparts. Numerous small exporters do not have the proper guidance and financing to improve the digitalization of their business. Furthermore, digital tools have the potential to benefit a broad range of industries throughout international trade. Hundreds of different industries engage in international trade with small businesses representing important components of those industries. Promoting digital tools across all industries would increase small business adoption.

²² U.S. Census Bureau. *Annual Business Survey*. 2018, <https://www.census.gov/programs-surveys/abs.html>.

Chapter 3: SME Listening Sessions Outreach

Priorities, Challenges, and Opportunities Identified by SMEs

The Office of Advocacy (Advocacy) solicited the views of small businesses to inform the TTC's focus on how SMEs can use and access digital tools. This chapter describes Advocacy's outreach effort and summarizes the small business participants' views on the priorities, challenges, and opportunities with the utilization and access of digital technologies when engaging in international trade.

Building Digital Capacity

The COVID-19 pandemic created a need for more businesses to obtain digital tools. In the post-pandemic era, there is still a demand for more business assistance setting up these tools. During the pandemic, a vice president of a state trade association found that many small businesses needed help with digital landscaping. For example, setting up email for these businesses opened pathways for growth. Some of the businesses she worked with did not have any digital tools framework. She emphasized the importance of technical assistance to small businesses, and that federal outreach and business assistance can help guide small businesses with obtaining specific tools.

A trade council executive director noted that digital tools allow small businesses to compete and reach the global market. She indicated that companies using digital strategies before the pandemic were able to sustain themselves after. The path to building digital capacity is not a level playing field. The trade council executive director stated that many underrepresented businesses simply do not have the resources to build their digital tools.

Operational Readiness

Digital tools provide value for streamlined performance and operational readiness. Adopting digital tools can help increase operational capacity without increasing capital expenditures. A Chief Executive Officer (CEO) of a small business in the defense industry noted that incorporating digital tools allows small businesses to reach and maintain new relationships. The defense industry CEO suggested that incorporating digital tools in industrial working environments would help with job efficiency for frontline industrial workers such as equipment operators. They also suggested that the government can foster this perspective by supporting the digital infrastructure to help provide tools in an affordable and secured manner. The defense industry CEO would like to see governments support policies that would integrate digital tools between large and small businesses where information could be shared throughout the supply chain.

The President and CEO of a small business in the manufacturing industry shared that one of his challenges was determining the most cost-effective way to ship internationally and observed that many small businesses that are new to exporting do not have international technology implementation, which can create issues with shipping or sourcing materials internationally.

Digital Marketing

A CEO of a small business in the service industry said that digital marketing helped boost his company. The CEO added how the deep technology sector is underrepresented by minority businesses, claiming that a very small percentage of minority businesses are involved with the SBIR program. New Hampshire outreach meeting participants discussed the importance of small business awareness of changes in marketing through technology. Helping small businesses change and adapt effectively with new digital tools helps businesses improve sales. However, an increase in marketing does not always result in more revenue if not employed effectively.

Digital Literacy and Skills

Building a website can serve as a barrier for many new small businesses. An owner of a small e-commerce drop-shipping company stated that there are a lot of new systems that must be integrated to run an online business. He observed that a successful website can help separate small businesses from other competitors. Furthermore, integrating email marketing and social media can be a challenge. Many small business owners want to see resources for more organic web traffic.

In addition, having a low-quality website inhibits e-commerce. The president of a small business in the energy sector noted that he had issues with gaining traction for a successful website, and that his primary barrier is the cost to build it. An owner of a small business in the service industry experienced challenges with building a professional website.

A founder and CEO of an exchange board believes in the need to increase digital literacy initiatives because many communities do not have the proper resources to learn more about technology. He suggested the government could focus on how people who service computer systems could boost our economy and alter the way minority communities may benefit from digital tools. He recommended developing a minority trade mission to help expand the minority tech industry.

A Chief Risk Officer in the service industry discussed the importance of hiring college students and interns who have experience with digital tools. Hiring freelancers 5-10 hours a week minimizes his cost of hiring someone from an established company that would charge a much higher rate for their services.

Participants at the New Hampshire outreach meeting stated that there are nonprofit organizations that teach digital skills, but very little instruction on digital tools in public schools and universities. They want more integrative approaches of learning digital tools to meet the high demand that exists for digital tool experts that can help small businesses with technology integration.

Fintech

The trade council executive director said financing for small business adaptation of digital tools is crucial and needs to improve for underrepresented businesses. The CEO of a trade association for online lending described that black-owned businesses are entering into the digital world more rapidly, which he says is demonstrated through PPP loans and lending. However, women and minority-owned businesses still have an uphill battle with traditional financial institutions. Also, he predicts that small businesses should have easy access to bank lending and fintech companies in the future.

High Speed Internet / Broadband

A fundamental barrier to digital uptake is lack of infrastructure access to broadband. Businesses involved in activities like e-commerce need high-speed internet to operate. Some parts of the country are delayed in their digital development because they have only recently acquired broadband. The CEO of a small business from American Samoa operates in a market that is not digitized. American Samoa only established high speed internet in 2018. The transition has been a struggle due to a skills gap. In addition, businesses in agriculture and farming do not have much exposure with digital tools. She noted that transitioning digital tools effectively will diminish barriers within island HUBZones of American Samoa.

A small farm business owner on Whidbey Island, WA, shared that there are parts of the country that struggle with connectivity. The CEO of an import export consulting and management company shared that infrastructure challenges can also impact the fulfillment process. For example, if an online company is based in a remote or rural location, the business could be negatively impacted by a storm or blackouts causing stress on internet service. A board member from a state internet cooperative shared that cost differences for internet service providers also impact broadband access. He stated that rural areas of New Hampshire would benefit the most from increased access, and that the state has close to a quarter billion dollars dedicated to broadband. He said it is expensive to build broadband in rural areas, but broadband would increase engagement between small businesses and consumers.

Cybersecurity

Some of the attendees expressed that they were not sure about their vulnerabilities regarding cybersecurity. Business owners are unaware of the risks. The founder of a cybersecurity consulting company started her business to address digital security problems. She noted that two specific problems that she noticed were phishing and ransomware. Phishing is when a web user receives a message through email or text wherein the sender is trying to acquire personal identified information, like social security numbers. Ransomware is when a criminal organization manages to get a piece of malware (a malicious computer program) into your system. Phishing can lead to ransomware. Third parties like cyber investigators or instant response firms can provide solutions to these issues, but they can be costly.

The Chief Risk Officer of a business growth platform mentioned that it would be helpful to have a checklist to identify all the issues with digital security. The small business owner on Whidbey Island mentioned, “There are a lot of concerns as well getting on the digital world and being a business regarding privacy, cybersecurity, and liability. There are additional costs as well getting those kinds of insurance coverage.” An attorney at a small business law firm stated that a data insurance policy is helpful in case of breaches, but the government should be more proactive in shutting down bad actors. An outreach meeting participant in New Hampshire stated that 65% of small businesses have had a recent attack stemming from cybersecurity breaches.

Cyber attacks cost money to repair, which impacts small businesses. Resources like the New Hampshire Small Business Development Center and the New Hampshire Tech Alliance, which offer free individualized cybersecurity assessments for small businesses, can provide much needed education on risks and prevent future attacks. In addition, small businesses may need better continued assistance with IT based cybersecurity operations.

Regulatory Barriers

An attorney at a small business law firm mentioned that a large barrier with doing business in the E.U. is GDPR (General Data Protection Regulation) compliance. There is no similar federal data compliance law in the United States. Many companies could incur large fines or restrictions when doing business overseas due to the complex nature of international law.

The CEO of a trade association for online lending commented that the 1982 moratorium on SBLC licenses should be withdrawn. He maintains that withdrawing it will serve the sub-\$150,000 credit needs of small businesses better than before and give fintech lenders the opportunity to help with digital tools for small business needs.

Government Resources

The CEO of a technology company suggested that digital tools from the federal government should have more programmatic transparency, including more engagement with small business offices in each district or region. The CEO suggested that there needs to be better technology updates on outreach and digital tools from regional offices. He further stated that outreach must be tailored towards targeting minority communities such as improving lines of communication, improving language barriers, and integration of simple technological tools.

Some of the participants shared that they struggled to connect with small business assistance offices around the country for resources and did not feel that the Small Business Development Centers were the most efficient or reliable resource to help navigate the varied issues they faced.

Chapter 4: Conclusion

Digital tools can help SMEs innovate, grow, and compete. Their uptake varies significantly across sectors, regions, and business owner groups. Much like the E.U. members of the working group, Advocacy found that small business priorities to promote uptake in digital tools included infrastructure needs such as broadband speed and access, digital literacy of business owners and employees and lack of digital skills training, and better financing options for SMEs. In addition, for U.S. SMEs, Advocacy found it critical to prioritize cybersecurity, digital marketing, and increased resource accessibility for small business counselling and assistance, including better matching needs with experts.

Continuing to improve access to broadband through infrastructure in rural and underserved communities is integral to SMEs' ability to fully participate in the digital market. Training and education gaps could be addressed with one-on-one assistance or instructional courses that have human support. SMEs can improve digital marketing by utilizing technology to appear in search results or have their products or services featured to targeted potential customers. With respect to financing, the traditional bank loan process can be lengthy. Better access to finance could be achieved through government partnership with fintech companies that are already servicing small businesses. Free or low-cost cybersecurity assessments conducted by trusted sources could assist with educating and protecting small business from online risks. Overall, increasing digital uptake depends on identifying the needs of business owners by industry and demographics of interest and tailoring outreach and engagement that will resonate with SMEs.