



The performance of Small and Medium Sized Businesses in a digital world

A report for the Connected Commerce Council
2019

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Executive summary

The digital era offers Small and Medium sized Businesses (SMBs) digital tools they can use to improve their performance and remain competitive in a fast-moving, more digitalized and global economy, in which customers are connected at all times and expect a seamless digital interaction that is accessible and responsive.

Digital tools are services, platforms and marketplaces that businesses use for marketing and communicating with customers, managing internal processes and logistics, and executing sales and payments (e.g. email, websites, social media, cloud-based software, etc.).

Deloitte developed a survey implemented by Opinion Matters across a sample of more than 1,000 SMBs in the U.S. The survey responses suggest that SMBs are aware of how important digitalization is to their business – they tend to use digital tools and observe how this use affects their business performance.

SMBs already make some use of digital tools – 99% of all SMBs appear to use at least one. This said, not all SMBs use a wide range of digital tools with as much intensity; in fact, the level of digital engagement is varied. Analysis of the survey responses classifies SMBs into four stages of their digital journeys and finds that around 60% of SMBs appear to have a

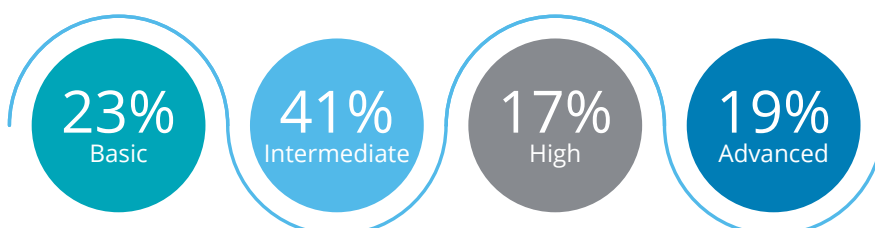
85% of all SMBs report that the digital tools they are using have helped their business in some way

more basic or intermediate level of digital engagement, and 40% have a higher or more advanced use of digital tools.

Most SMBs observe benefits from using these tools – 85% confirm that the digital tools they are using have helped their business in some way. These SMBs also report that digital tools have helped their business performance, and in particular, this study structures these impacts in four areas comprising customers, financial performance, jobs, and innovation.

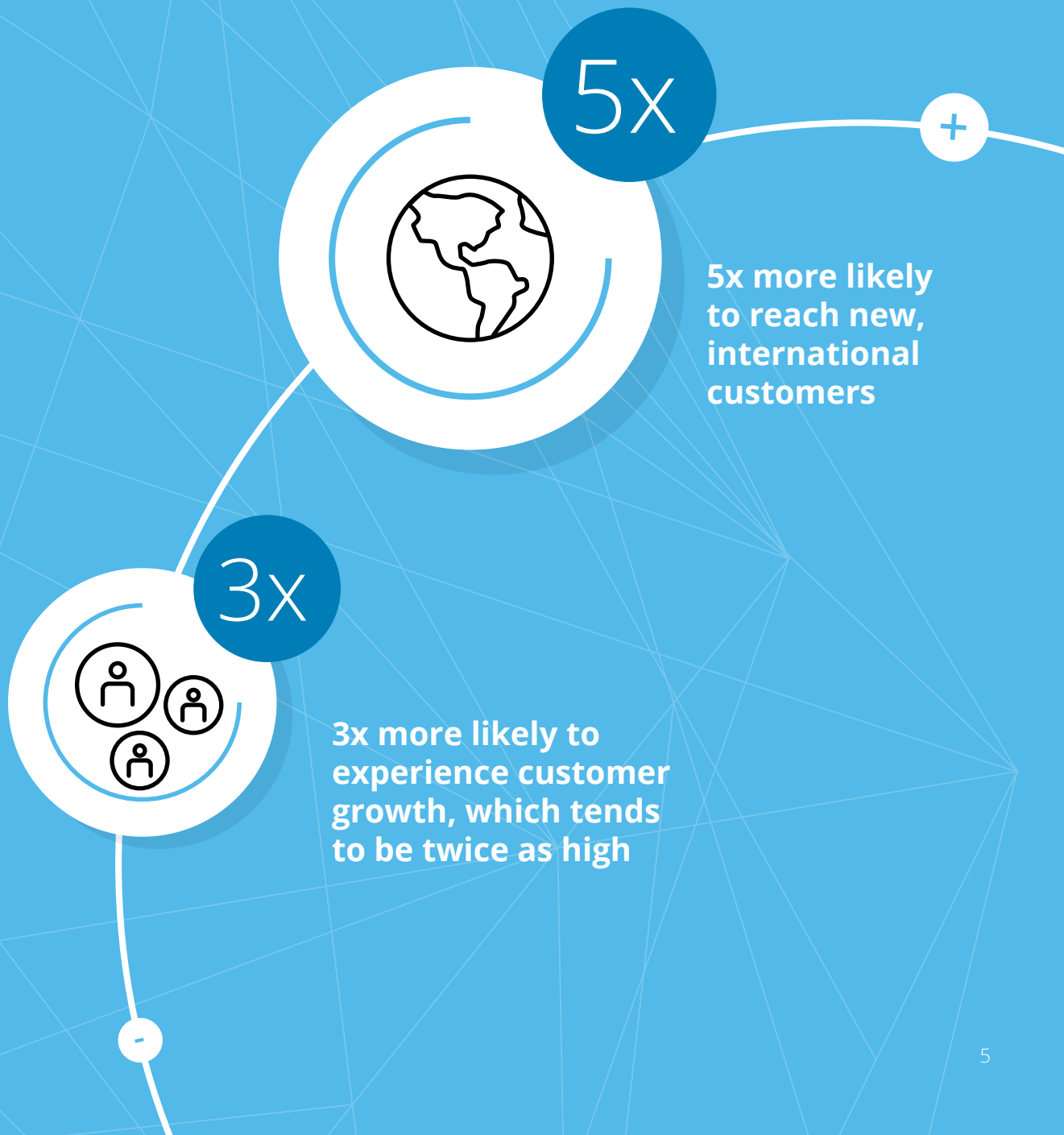
Deloitte carried out econometric analyses of the survey data to isolate and quantify the relationships between different levels of digitalization and SMB performance while controlling for business characteristics such as business maturity, sector, and size. This quantitative analysis suggests that SMBs with higher levels of digital engagement do indeed have a superior business performance to those with lower or more basic engagement with digital tools.

SMBs at different stages of the digital journey



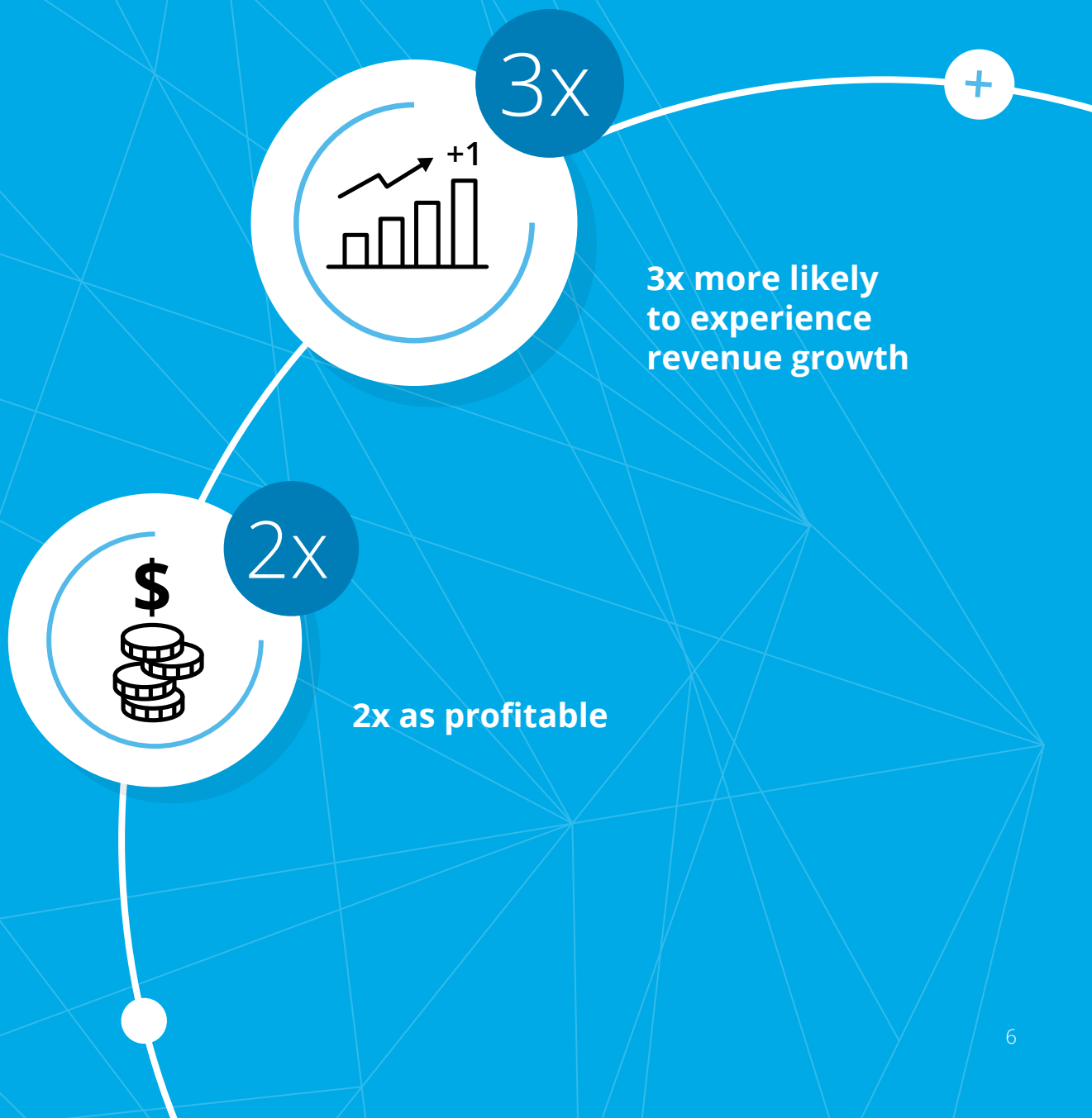
More customers

More than 40% of all SMBs report customer growth and attribute some of that growth to the use of digital tools. SMBs with an advanced use of digital tools are more likely to experience customer growth than their less digitalized peers.



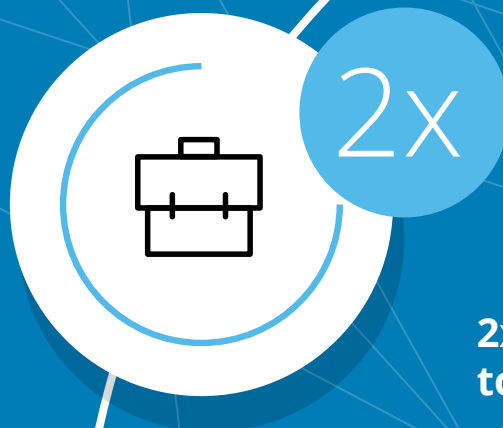
Better financial performance

More than 70% of all SMBs report revenue growth and attribute some of this growth to the use of digital tools. More digitalized SMBs have a higher likelihood of experiencing revenue growth than their less digital peers.



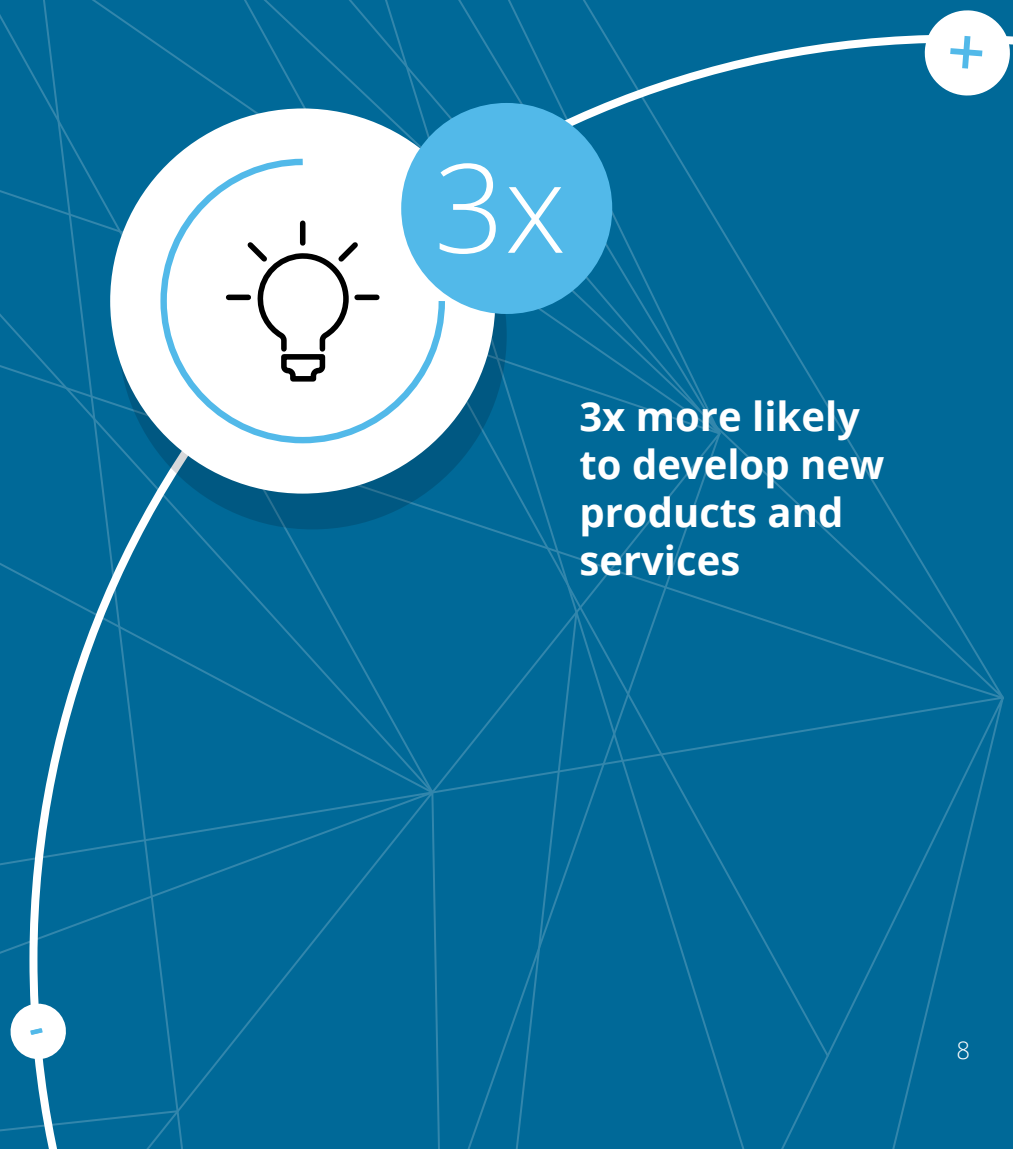
More jobs

SMBs with more extensive use of digital tools report that they employ twice the number of people as SMBs with a more basic use of tools. These SMBs also exhibit higher employment growth than their less digitalized peers.



More innovation

Around 90% of all SMBs believe that digital tools have fostered innovation in their business, particularly in entering new markets and communicating with customers. SMBs with a more advanced use of digital tools report more innovative practices than their less digitalized peers.



The analysis, therefore, finds that businesses with higher levels of digital engagement are more likely to have a growing customer base and more access to customers in the U.S. and internationally, a better financial performance, more employment growth, and more innovative practices.

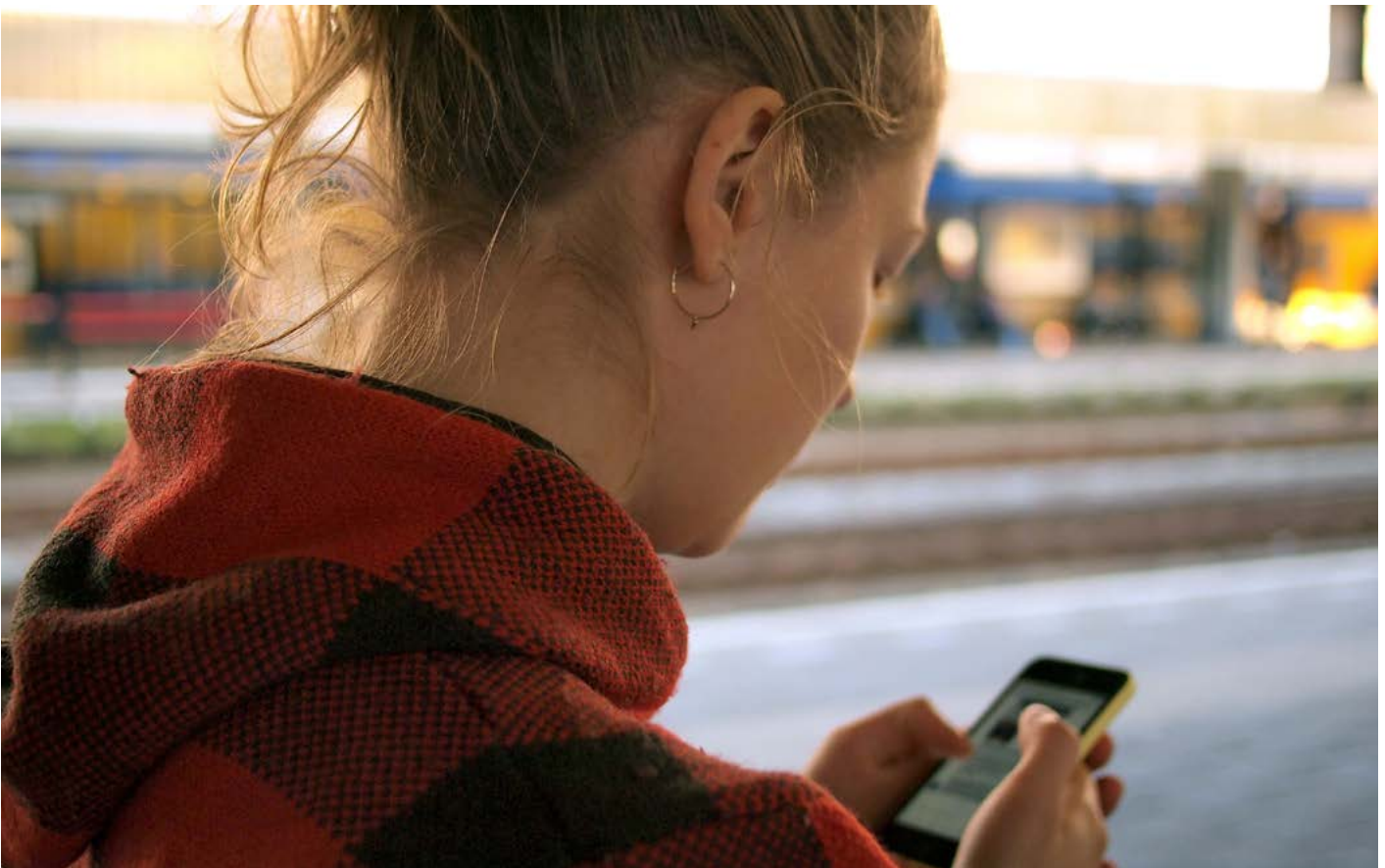
Given the positive effects digital tools have on business performance, it is no surprise that 70% of the SMBs have some plan for how they may use digital tools in the future, although only a third are looking into the next five or ten years.

Having a clear approach for testing and using digital tools in a business is important to remain competitive, particularly when SMBs tend to face digital barriers.

In fact, more than 75% of all SMBs believe that they face at least one internal or external barrier to increasing their use of digital tools.

SMBs already play a key role in the U.S. economy, employing almost half of the total workforce. Addressing the internal and external barriers faced by SMBs may enable them to use more digital tools, and offer them new opportunities to increase their size, productivity and profitability, and ultimately, their contribution to the U.S. economy.

More than 75% of SMBs report that they face at least one barrier to increasing the use of digital tools



Introduction

There are over 30 million Small and Medium sized Businesses (“SMB”) of fewer than 500 employees in the U.S. representing 99.9% of the total business community.¹

This report considers how SMBs use digital tools to improve their performance and maximize their already significant contribution to the U.S. economy. In particular, the report aims to:

- Establish the level of digitalization of SMBs;
- Quantify the impact of digital tools on SMB performance; and
- Explore barriers that SMBs face when considering the use of digital tools.

Deloitte prepared a survey questionnaire, which was implemented by Opinion Matters, an independent market research consultancy, on a sample of over 1,000 SMB owners and senior managers in the U.S. The survey found that SMBs have a diverse level of sophistication in using digital tools. In order to establish how SMBs may benefit

from the use of digital tools, Deloitte classified each business into one of four levels of digital engagement based on the varying degrees of digital tool use.

The survey asked SMBs to state the impact they perceive from their use of digital tools on their business, across areas such as customer engagement and satisfaction, the product and service offering, operating costs, and other operating practices, all of which affect business revenues, profitability and employment.

Deloitte has tested these impacts by carrying out statistical analyses to establish the differences in performance between more and less digitalized SMBs.² In particular, the study focuses on differences across four areas comprising customers, financial performance, jobs and innovation.

Finally, the report also explores barriers that SMBs face when considering the use of digital tools.

The study analyzed data from a survey of more than 1,000 SMBs in the U.S. to understand the impact of digital tools on their performance



SMBs in the U.S. economy

The role of SMBs in the U.S. economy

Small and medium sized businesses are a major component of the U.S. economy and make up for approximately 45% of U.S. Gross Domestic Product³.

These businesses employ almost half of the U.S. private workforce⁴, which corresponds to 58.9 million people^{5,6}. Small firms employ the majority of the workforce in several industries, such as real estate, wholesale trade and technical services⁷. Furthermore, small businesses have produced about two thirds of the net job growth since 2000⁸.

Small businesses also have a relevant international reach. Almost 300,000 small businesses in the U.S. export, representing 97.6% of all exporting firms.⁹ The value of these exports is equivalent to 32.9% of the \$1.3 trillion U.S. total.¹⁰

Small businesses are key innovators in the U.S. economy. Small firms that engage in Research and Development generate significantly more patents per employee, and these patents are cited more often than patents from larger firms.¹¹ Additionally, research has found that small businesses contribute to developing emerging technologies. For example, in recent years, small businesses have been responsible for 32% of patents in solar energy and 15% in batteries and fuel cells.¹²

The SMBs in our survey sample

Opinion Matters surveyed 1,010 SMB owners and senior managers in the U.S. A first exploratory analysis of the survey shows that the average revenue of SMBs in the sample is around \$35 million, which is similar to the average revenue of businesses with more than 50 employees. Generally, the majority of these SMB respondents have a lower revenue than this; in fact, a sub-sample of more than 800 SMBs have an average revenue of around \$6 million. This result is closer to the average of all SMBs in the U.S. with more than five employees.¹³

The survey asked businesses about their performance in 2018 during a period of over a week, between 22nd May 2019 and 3rd June 2019. The survey sample contains SMBs with different characteristics, from a range of economic sectors of the U.S. economy, and from across the U.S. geography. In particular, more than 15% of SMB respondents were from the West, over 22% from the Midwest, around 27% from the Northeast, 25% from the Southeast and a final 10% from the Southwest of the U.S. This is a similar geographical breakdown to that of the total number of SMBs with more than 5 employees in the U.S.¹⁴

Overview of the digital tools that SMBs use to support their day-to-day activities

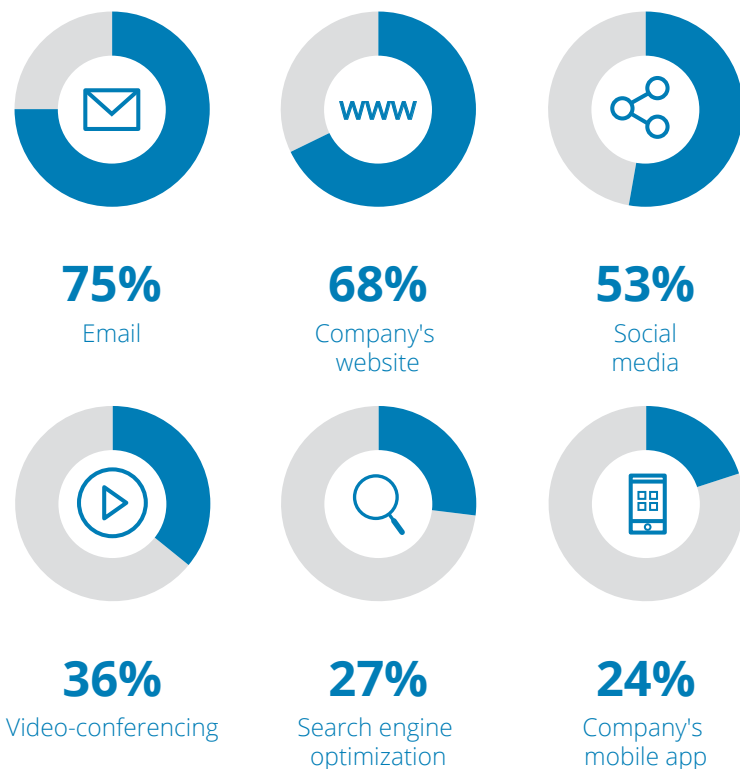
This report considers a range of digital tools that are currently available to SMBs, which can be distributed in three groups based on their primary use: communication, internal management and logistics, and sales management.

Specifically, over 90% of all SMBs use digital tools for communication purposes, over 80% use digital tools for internal management and logistic activities, and more than 40% use tools for sales management.

Over 90% of all SMBs use digital tools for communication purposes

There is a range of tools that help SMBs to communicate more effectively and reach customers with more ease. These tools include business e-mail, online presence (online directories, own company's website, own mobile app and third party sites), and social media.

Figure 1. Level of use of tools primarily employed for communication purposes in a sample of more than 1,000 SMBs in the U.S.



Note: A sample of 1,010 SMBs were asked "To your best knowledge, what digital tools does your business use currently?"

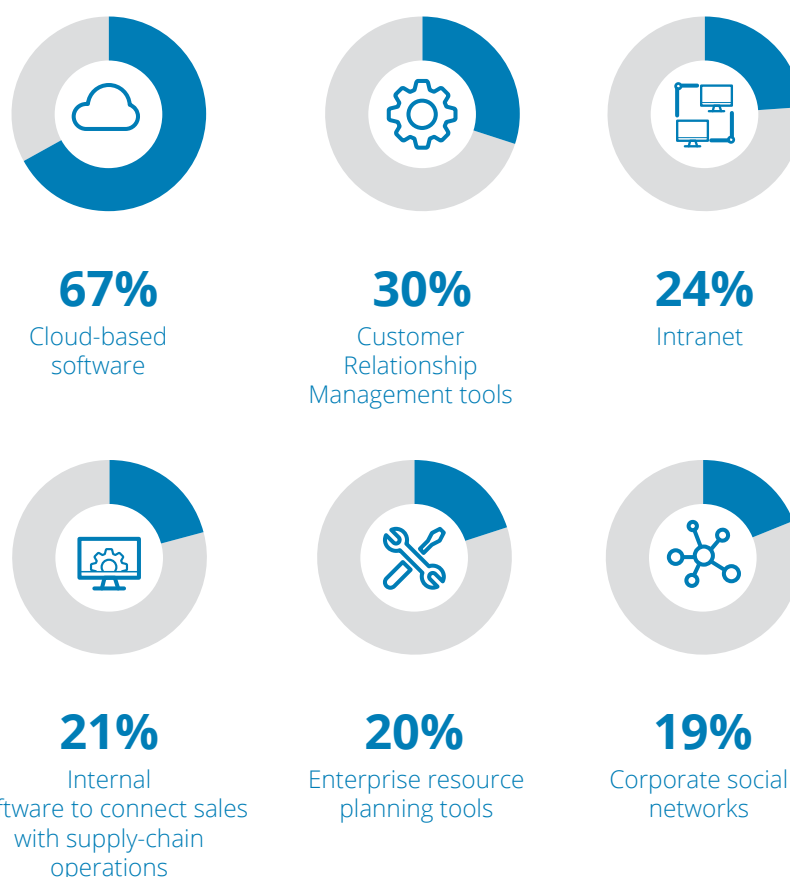
Survey respondents have also shared ways in which they advertise their products and services, use their own website, and use social media to support their business activities.

- The top three channels via which SMBs advertise their business comprise social media, emails and other online opportunities such as banners on webpages or apps. This said, between 40-50% of SMBs also use direct mail advertising and traditional, non-digital channels. To a lesser degree, some SMBs employ search engine optimization methods and online video advertising.
- Almost half of the SMBs that have a website use it to share basic contact and product or service information, and the other half use it to interact with customers with an online account or login. A third of SMBs that have a website use it to sell their products and manage bookings.
- Almost all SMBs that use social media do so to promote products and services, and around 70% of them use social media to engage with customers and enhance their experience.

Over 80% of all SMBs use digital tools for internal management and logistics

A second group of digital tools have a wide range of applications to improve business processes and productivity. This includes cloud-based software, Enterprise Resource Planning tools, corporate social networks and messaging tools, and Customer Relationship Management software.

Figure 2. Level of usage of tools primarily employed for internal management and logistics in a sample of more than 1,000 SMBs in the U.S.



Note: A sample of 1,010 SMBs were asked "To your best knowledge, what digital tools does your business use currently?"

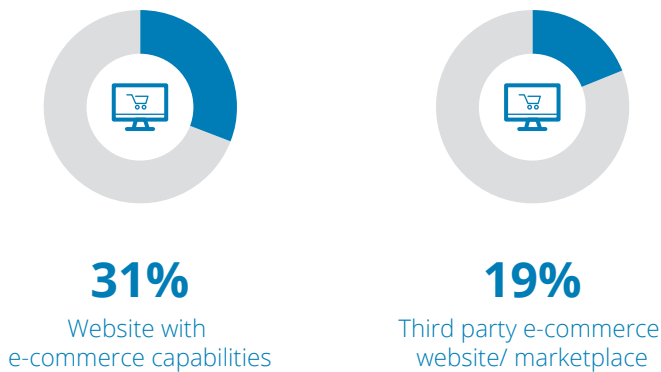
Over 40% of all SMBs use digital tools for sales management

A final group of tools considered in this report can support the sales process by facilitating bookings and purchases through online channels, such as the company’s own website and/or the use of third party, e-commerce platforms.

SMB respondents also shared more details on where and how they sell their products, their website’s functionality, and whether or not they use insights of customer contact online.

- 40% of all SMBs sell their products online via their website or a third-party e-commerce site, and 40% of SMBs sell them at their store.
- A third of SMBs that have a website use it to sell their products, manage bookings or place reservations, and one fifth use third party marketplaces.
- 60% of all SMBs suggest that they use insights from visitors and customers who interact with their business online to market their products and services more effectively and/or customize and personalize them.

Figure 3. Level of use of tools that help with sales management in a sample of more than 1,000 SMBs in the U.S.



Note: A sample of 1,010 SMBs were asked “To your best knowledge, what digital tools does your business use currently?”





The digital journey of SMBs

The research in this report establishes a ranking of SMBs in the U.S. by their level of digitalization, primarily to evaluate whether more digitalized SMBs exhibit a better performance in comparison to less digitalized businesses.

Deloitte applied a two-step methodology to group SMBs in four stages of their digital journeys, from basic to advanced levels of digitalization, similar to previous Deloitte reports such as "Connecting Small Businesses in the U.S."¹⁶. This journey highlights the extent to which and sophistication in how these businesses are currently using digital tools.

Defining the Digital Journey

This report classifies businesses in four stages of their digital journey by using a two-step process based on academic literature e.g. Chris Ding and Xiaofeng He (2004).¹⁵

First, Deloitte applies Principal Component Analysis to reduce the number of dimensions (or survey questions) that can identify the level of digitalization of an SMB, without losing important information. This makes it easier to develop a comprehensive picture of the level of digitalization of SMBs.

Second, Deloitte applies K-means clustering, a method to develop groupings of SMBs with similar characteristics, and thus, similar levels of digitalization. These groups become the four stages described in this section. K-means is a widely used, unsupervised learning algorithm that subdivides individuals into clusters, i.e. the SMBs in four stages of the digital journey, by minimizing distances between the individuals along dimensions, in this case, the principal components.

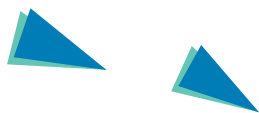
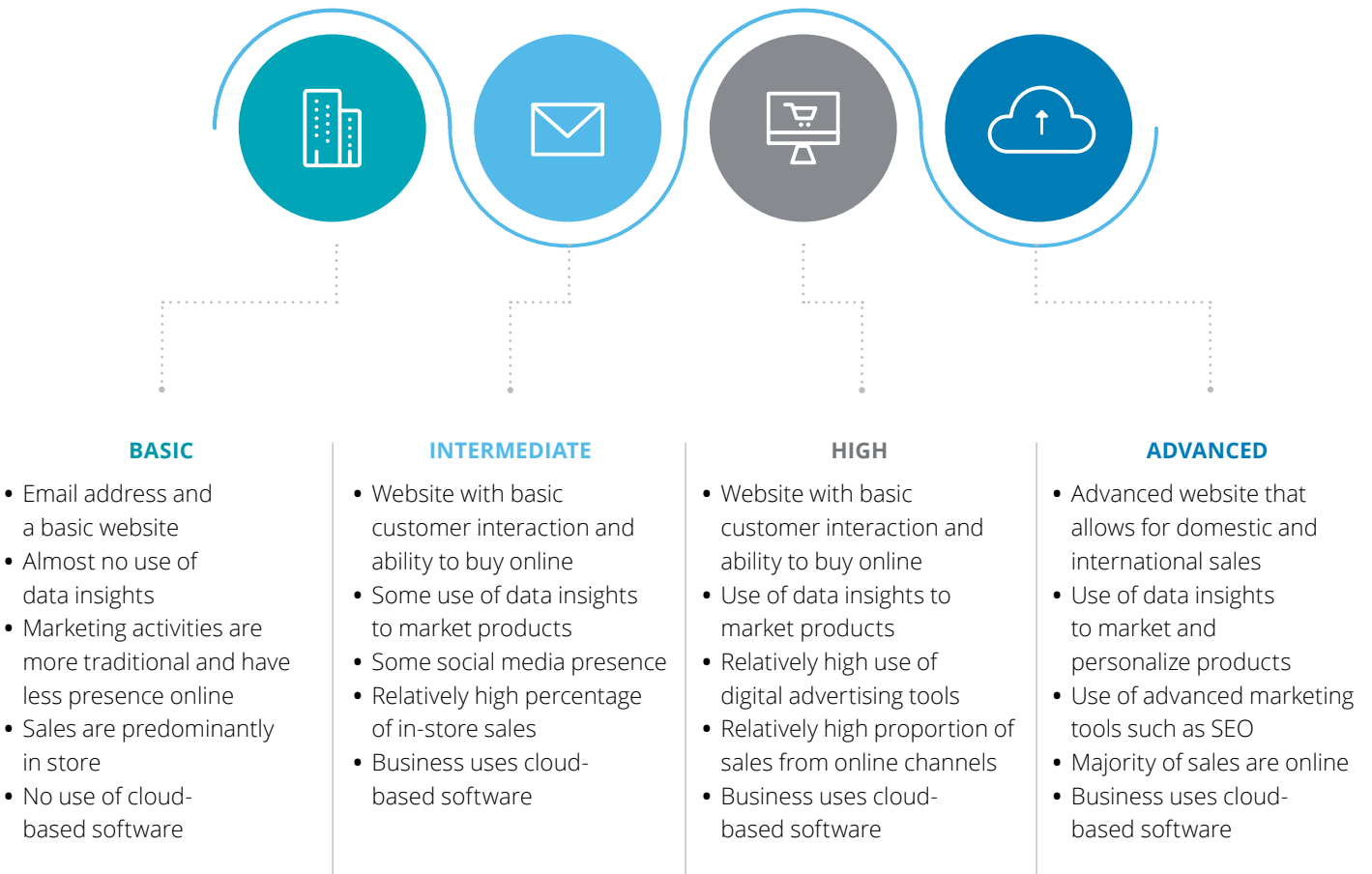


Figure 4. Selection of high-level features associated with each of the four stages of the SMB digital journey



SMBs report a diverse use of digital tools. This report uses analytics to **group SMBs into four stages of their digital journey**

Characterization of the four stages of SMB digitalization

23% of businesses are at the most basic stage in their digital journey.

These businesses tend to have low presence online. In particular, 50% of SMBs in the category do not have a **website**, and 60% have no social media presence. Only a third of SMBs in this category engaged in online forms of **marketing** such as ad banners on websites or search-related advertising, and most of their **sales** come from offline channels. The businesses in this category are the least likely to use any digital tools for **internal management**, for example, only 6% report using enterprise resource planning tools and 10% software to connect sales with supply chain operations.

23%

BASIC

INTERMEDIATE

HIGH

ADVANCED

17% of businesses have a high digital engagement.

More than 70% of the businesses in this category had a **website**, almost 40% had a website with some level of customer interaction, and a fifth sold their products and services from their website. Almost a 60% of SMBs in this category engaged in online **marketing** such as ad banners on websites and more than 50% of these businesses had most of their **sales** come from online channels. The businesses in this category have a low likelihood of using digital tools for **internal management**, for example, 30% report using enterprise resource planning tools and 20% software to connect sales with supply chain operations.

17%

41%

41% of businesses are at an intermediate level of digital engagement.

Around 70% of these "intermediate" businesses had a **website**, a third had a website with some level of customer interaction, and a fifth can sell products and services from their website. Almost half of SMBs in this category engaged in online forms of **marketing** such as ad banners on websites or search-related advertising, and 40% of these businesses had most of their **sales** come from online channels. The businesses in this category have a low likelihood of using digital tools for **internal management**, for example, only 16% report using enterprise resource planning tools and 20% software to connect sales with supply chain operations.

19%

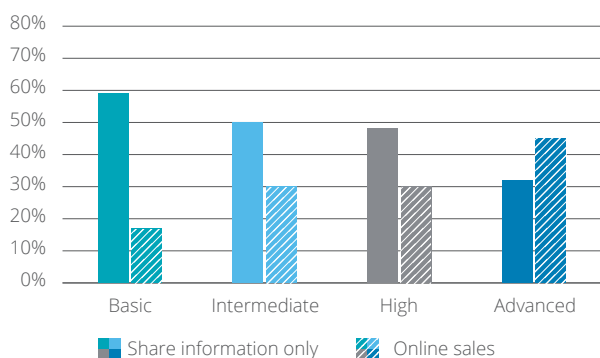
19% of businesses are at an advanced stage in their digital journeys.

Around 80% of these businesses had a **website**, 50% had a website with some level of customer interaction, and a third sold their products and services from their website. More than 75% collect data of visitors to their website, and many use this data to personalize their products and services. Almost 75% of SMBs at this "advanced" stage engaged in online **marketing**, and more than 65% of these "advanced" businesses had most of their **sales** come from online channels. These "advanced" businesses have the highest likelihood of using digital tools for **internal management**, for example, 40% report using enterprise resource planning tools and software to connect sales with supply chain operations.

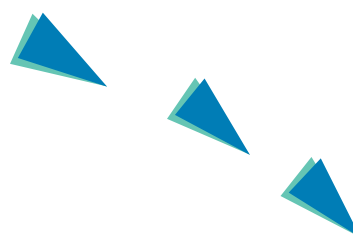
In addition, there are distinct differences in the way an SMB operates at these different stages, which can be exemplified with five day-to-day activities across their communications—their own website and advertising; internal management and logistics— data insights to inform business decisions and resource planning tools; and sales management— sales channels.

Firms with a more advanced use of digital tools are, on average, around twice more likely to have a website that allows customers to buy products and services than more basic SMBs.

Figure 5. Website functionalities

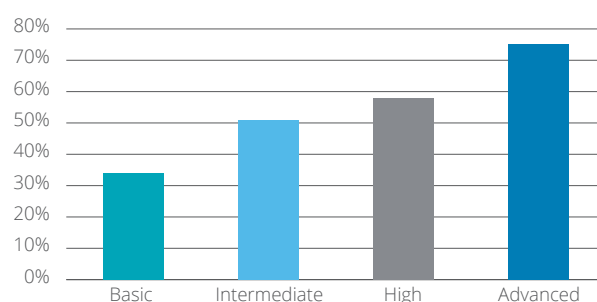


Note: A sample of 685 SMBs were asked “Which of the following functionalities does your business website have?”



On average, advanced businesses are twice more likely to advertise online.

Figure 6. Advertising online



Note: A sample of 744 SMBs were asked “What type of advertising does your business engage in?”

Case study N. 1

Kimberly Sundt | Inspired Hospitality Atlanta

The business now

Kimberly Sundt is a sole trader who runs a small hospitality advisory and marketing business, which in the past, ran marketing and rebranding projects primarily in the southeast of the U.S. The business is now pivoting towards more online-based activity, which includes reviewing the client’s presence online to evaluating current and potential customer engagement. The business makes an average annual revenue of around **\$250k**.

Use of digital tools

Kimberly uses a number of digital tools, which include various **social media** platforms to capture visitors to her business’ website and attract new customers. She also uses other **communications tools** that help her create and manage her social media content. Kimberly utilizes a range of **internal management tools**, such as apps for payment processing and cloud-based software to store information, including video content for webcast sessions.

Impact of digital tools

Kimberly notes that social media platforms have not only been helpful in building awareness of her brand and understanding her customers, but also in attracting new clients. Kimberly reports that about 20% of the visitors to her website reach her page via social media, and **10% of her clients also come from social media**.

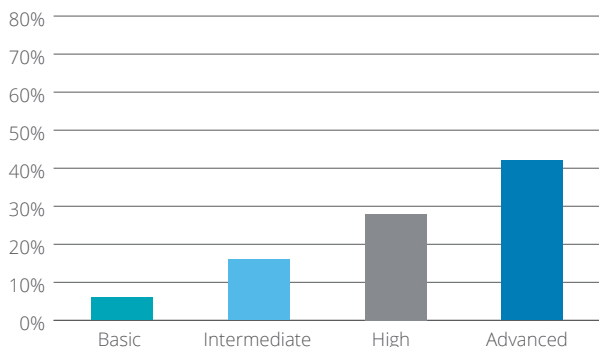
Kimberly estimates that the internal management and communication tools that she uses to develop and manage her social media content, edit creative materials and develop marketing products could **save her around 15 hours each week**; which is a significant amount of hours that she can re-invest in providing her services to her clients.

The future

Kimberly is **looking to expand her business to provide online learning**, and believes this is only possible for her thanks to digital tools that help her with the preparation and delivery of these training courses, from editing videos and creating the screen shares to delivering the actual training interactively.

SMBs that are more digitalized are, on average, almost eight times more likely to use resource planning tools to support their operations, when compared to firms that have a more basic use of digital tools.

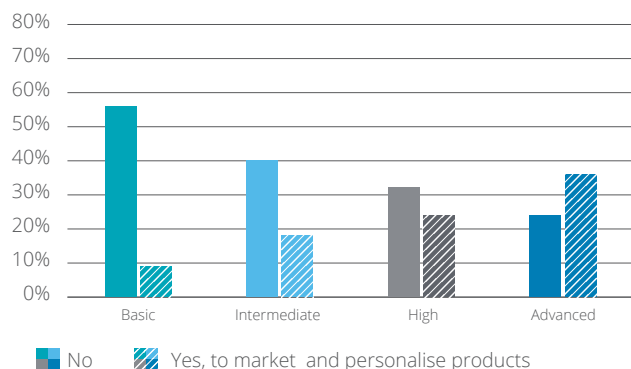
Figure 7. Use of resource planning tools



Note: A sample of 1,010 SMBs were asked “To your best knowledge, what digital tools does your business use currently?”

More digitalized SMBs are almost four times more likely to market and personalize products based on the use of data insights from visitors and customers who visit their online or mobile tools than less digitalized peers.

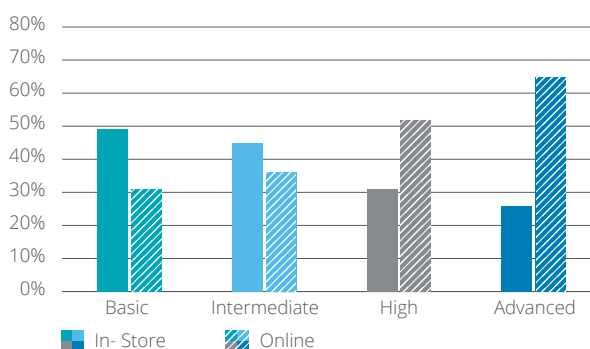
Figure 8. Use of data insight in the business



Note: A sample of 1,000 SMBs were asked “Does your business make use of insights about the visitors and customers who interact with your online and/ or mobile tools?”

More advanced SMBs are, on average, twice more likely to sell most of their products online when compared to firms that have a more basic use of digital tools, and 50% less likely to sell them in-store.

Figure 9. Sales channels



Note: A sample of 1,010 SMBs were asked “Where does your business sell most of your products and services?”

Case study N. 2

Kyris Kustoms Jackson

The business now

This small textile business is based in Mississippi, specializes in semi-formal and formal menswear, and has an international client base. In 2018, the business **employed three people**, and made **around \$270k in revenue**.

Use of digital tools

The business uses a number of digital tools, including a company **website** to provide customers with product and contact information. The business uses **social media platforms** as the primary channel to reach new customers in the U.S. and internationally. Kyris’ business also uses **internal management tools** for accounting activities and processing payments.

Impact of digital tools

The business owner noted that their online digital marketing strategy primarily builds on social media. He reports that their social media pages **reach more than 10,000 people per month**, 80% of which visit their website. More than 10% of these visitors phone or email Kyris Kustoms to inquire about and/or purchase their products.

The future

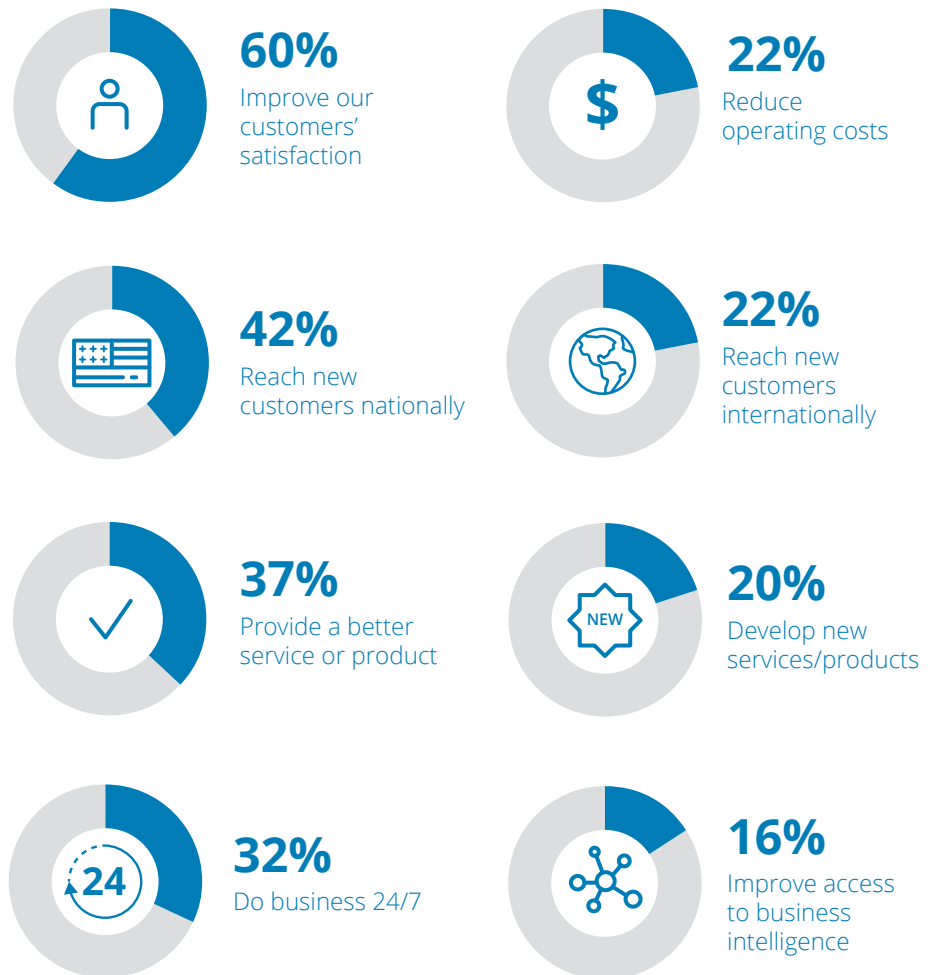
Kyris is looking to **expand their website’s capabilities** so that customers can purchase products online more easily. He sees this as an opportunity to scale his business in the near future.

Digital tools have an impact on SMB performance

SMBs that use digital tools perceive a wide range of benefits: 85% of SMBs that use at least one digital tool have stated that these tools have enhanced their business performance.

The survey also asked SMBs to report the top three ways in which digital tools may have helped them, which include improving their customers' satisfaction, reaching new customers in the U.S. and providing a better service and/or product.

Figure 10. Ways in which digital tools help SMBs



Note: A sample of 844 SMBs were asked "How have these digital tools helped your business? Please select the top three ways in which these digital tools may have helped your business."

Further analysis finds that businesses with higher levels of digital engagement are more likely to have a superior business performance to those with a more basic use of digital tools. In particular, more advanced businesses exhibit a growing customer base, more access to markets in the U.S. and internationally, a better

financial performance, more employment growth and more innovative practices.

This section presents these findings grouped into four themes associated with business performance, which comprise customers, financial performance, jobs and innovation.

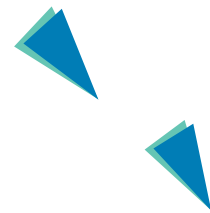
Data analysis of SMB performance

This study has employed econometric and other statistical techniques to identify and quantify the relationship between SMBs' digital engagement and key performance indicators, for example, revenue growth, customer growth and profitability.

Econometric analysis allows us to understand the differences in performance across these indicators while controlling for other factors such as business maturity, sector, size, etc. In doing so, this methodology isolates the relationship between SMBs' performance and their digitalization.

The approach used in this study varies depending on the underlying characteristics of the survey data. For example:

- For categorical variables, where respondents select from a discrete set of choices, such as whether or not SMBs are able to reach international customers, the report applies logistic regressions to isolate and quantify how these variables may vary with the level of digitalization.
- For continuous variables, where respondents have been able to provide numerical answers such as with their profit, the report employs linear regression models to isolate and quantify how these key performance variables may vary with the level of digitalization.



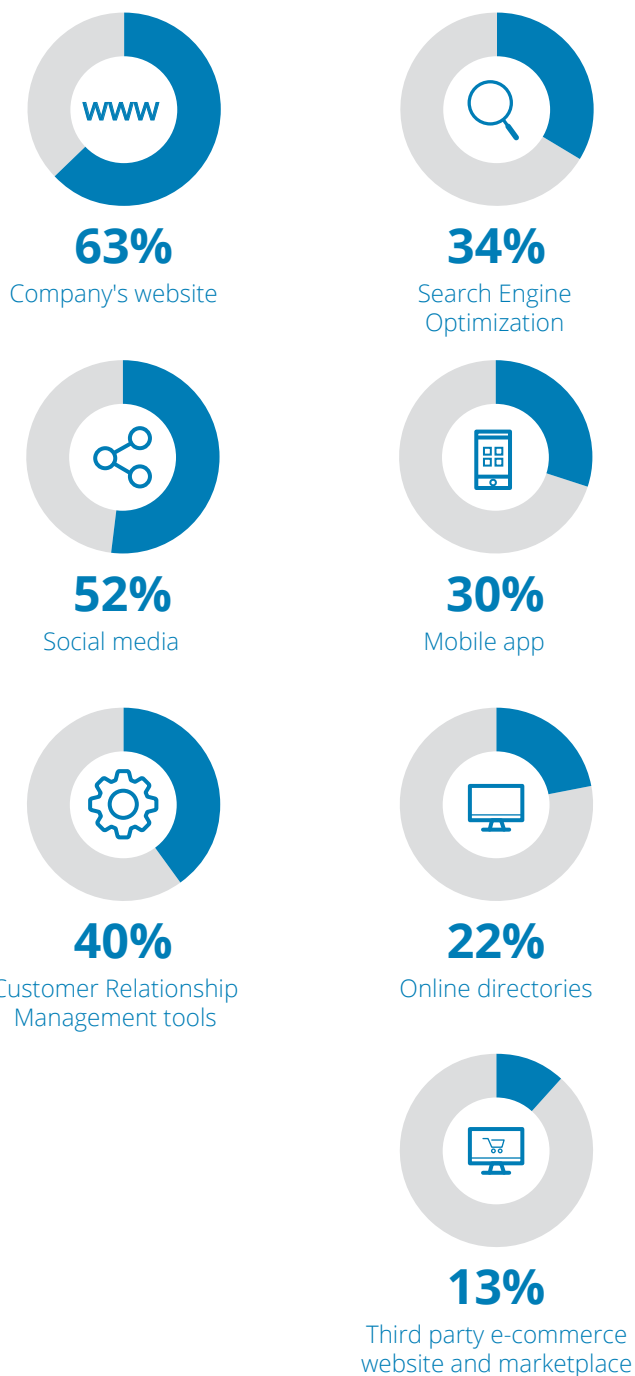
Customers: More than 40% of SMBs report customer growth and attribute some of this to the use of digital tools

Customer growth is a key driver of business performance. In fact, 80% of businesses report that the acquisition of new customers contributed to their revenue growth in the last year.

In this context, more than 40% of all SMBs have reported some customer growth in the last year and attributed some of this growth to the use of digital tools; in particular, having their own website, and using social media and Customer Relationship Management tools. On average, these SMBs attributed over 35% of their customer growth to their use of digital tools.

Further analysis finds that SMBs with advanced digital engagement are three times more likely to have experienced customer growth, which is on average twice as high.

Figure 11. Tools that SMBs report to have helped them gain new customers in the last year



Note: A sample of 444 SMBs were asked "Which of the following digital tools have enabled your business to gain new customers in the last financial year?"

These new customers come from the SMBs' local environment, other U.S. markets or markets in other countries.

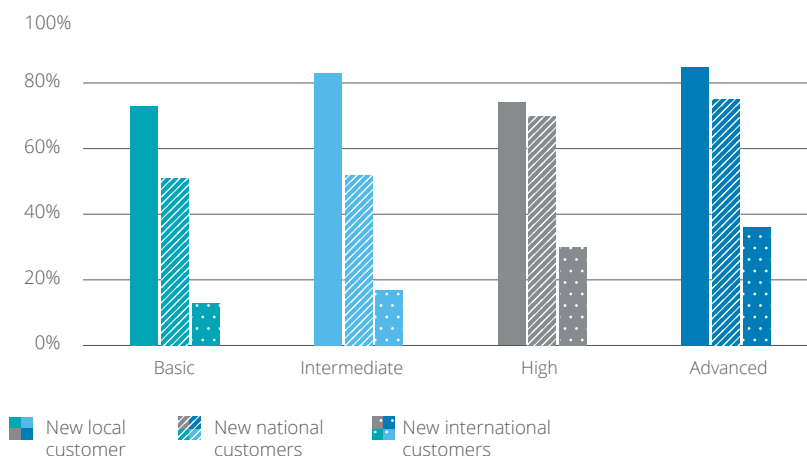
As depicted on Figure 12, most of the new, revenue-generating customers appear to come from their local markets, and this does not vary significantly with the level of digitalization. Customers from other parts of the U.S. and other countries, however, become a more important source of revenue growth as the SMBs advance on their digital journey.

More than half of SMBs also report that digital tools have helped them access international markets directly and/or made it cheaper to do so. Analysis for this report shows that SMBs that are at a more advanced stage on their digital journey tend to be five times more likely to reach international customers than less digitalized business.

This result is broadly consistent with previous Deloitte studies¹⁷, which have also found that small businesses with a more advanced use of digital tools are more likely to export than their less digitalized peers. Recent research evidence¹⁸ evaluated by the Organization for Economic Cooperation and Development (OECD) has shown that digital tools may facilitate access to international markets for micro enterprises. In a recent analysis, the World Trade Organization¹⁹ also finds that new technologies and digitalization may raise trade growth.

More digitalized businesses are thus more likely to have a growing customer base, with a relatively stronger international dimension, and the evidence suggests that this contributes to revenue growth.

Figure 12. New customers



Note: A sample of 600 SMBs were asked "What type of new customers have you been able to tap into?"

Case study N. 3

A Small, Retail Business Los Angeles

The business now

This small, retail business is a family-owned company based in Los Angeles and established in 1979, offering contemporary products for the home. In 2018, the business employed **seven people** and **made \$3 million in revenue**.

Use of digital tools

The business uses a range of digital tools. In particular, the business has a **targeted digital marketing** strategy, with a focus on social media, video content, and partnerships with influencers and **sells products online** through the business' own webpage and third party online marketplaces.

Impact of digital tools

The business partners with influencers to promote their products through merchandising, giveaways, and product-testing video blogs.

The owner reports this has

attracted new customers and has had a significant impact on sales.

In particular, these digital marketing efforts, coupled with additional resources, have made a significant contribution to revenue growth. As a result, the business expects to triple its revenue in 2019. In addition, the business benefits from third-party marketplaces: 80-90% of the business' sales take place on third-party marketplaces, which will likely increase as the company expands and grows.

The future

The management team also sees that digital tools, and in particular, **digital marketing and online marketplaces, will be key as they move forward** with their plans to take the business to new markets in North America and Europe.

Financial performance: More than 70% of SMBs report revenue growth and attribute some of this to the use of digital tools

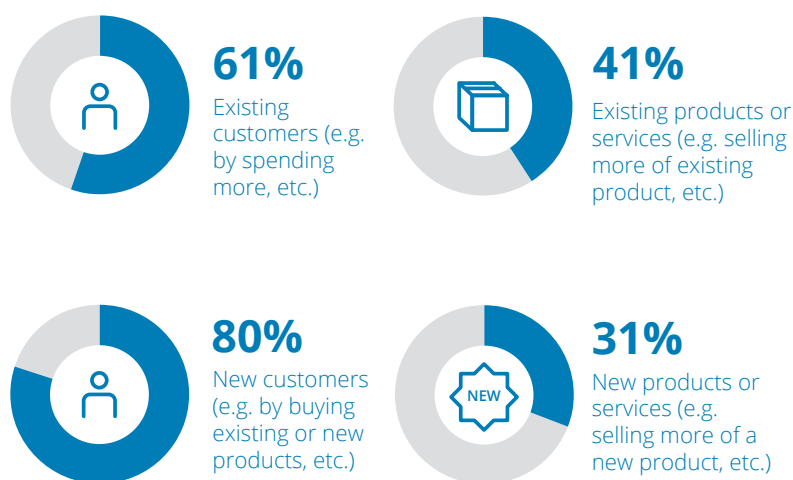
In the last year, more than 75% of all SMBs experienced some revenue growth. In particular, SMBs report on a number of factors that drove this revenue growth, which include customer growth from existing or new markets, diversification of the customer base and the introduction of new products and services.

More than 90% of these SMBs experiencing revenue growth attribute some of this growth to their use of digital tools, which is to say that, in the last year, 70% of all SMBs have experienced revenue growth in part due to their use of digital tools. On average, these SMBs attributed around 30% of their growth to the use of digital tools. In this context, further analysis also finds that more digitalized businesses are three times more likely to experience revenue growth than less digitalized firms.

This study has also found that SMBs at the later stages of their digital journey are twice more likely to experience higher revenue growth than their less digitalized peers. This result is broadly consistent with previous Deloitte studies²⁰, which have also found that small businesses with more advanced use of digital tools have higher revenue growth than their less digitalized peers.



Figure 13. Key drivers of revenue growth reported by SMBs



Note: A sample of 746 SMBs were asked "Which of the following contributed to your business' revenue growth over the last financial year?"

When asked about their profitability, 85% of all SMBs note that digital tools have helped them improve their business' profitability in the last year. Further analysis concluded that, on average, more advanced SMBs also appear to be twice more profitable than their more basic peers. This result is possible not only because of potentially higher revenue growth but also reductions in operating costs. In particular, more than 20% of the SMBs that use digital tools report

reducing operating cost as one of the top three benefits from using digital tools, and, on average, they attribute one fifth of this reduction to the use of these tools.

Looking ahead, more than three quarters of all SMBs expect that digital tools will play a role in their future revenue growth. Further analysis shows that businesses that are at a more advanced stage of their digital journey are also twice more likely to expect to grow in the next 12 months.

Case study N. 4

BBQ Bus Smokehouse & Catering Washington DC

The business now

BBQ Bus is a small business based in Washington DC, founded by Che and Tadd in 2011, when they opened their BBQ Bus food truck. The company now has four differentiated and complementary businesses comprising the food truck, a smokehouse restaurant, catering, and a food store. In 2018, the business employed **twelve people** and made **\$700k in revenue**.

Use of digital tools

The business uses several digital tools, including **social media** and online platforms to build brand awareness and engage with customers, targeted digital advertisements for returning customers, food **delivery platforms** to reach existing and new customers more effectively, and **cloud-based software** for information keeping and reporting.

Impact of digital tools

The business relies on social media platforms to communicate with customers, from providing feedback on the type of food they like to retaining and acquiring new customers.

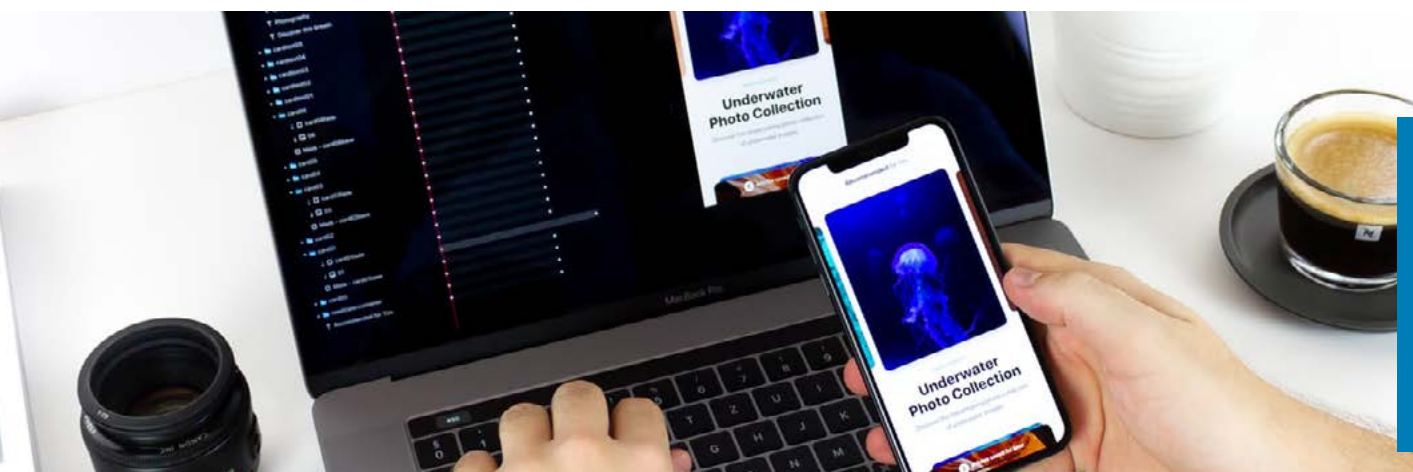
The management team estimates that around **40-50% of visitors to the business' core social media pages click through to the website or call the store to make a business inquiry**. For their catering business, more than **90% of their sales are initiated** through inquiries on the BBQ Bus' webpage, in part thanks to effective targeted advertising.

For the retail business, the management estimates that between **40-70% of sales are facilitated by digital tools**, in particular, food delivery platforms. The management estimates that more than 90% of these would not be possible without these tools, which would mean that having a more advanced use of digital tools in their retail business facilitates around twice as many sales.

The future

The management team sees an online advertising strategy based on **brief online video content core to building brand awareness** going forward, reaching new customers in a more direct and efficient way.

85% of all SMBs note that digital tools have helped them improve their business' profitability in the last year



Jobs: SMBs with more extensive use of digital tools report employing twice the number of people as other SMBs

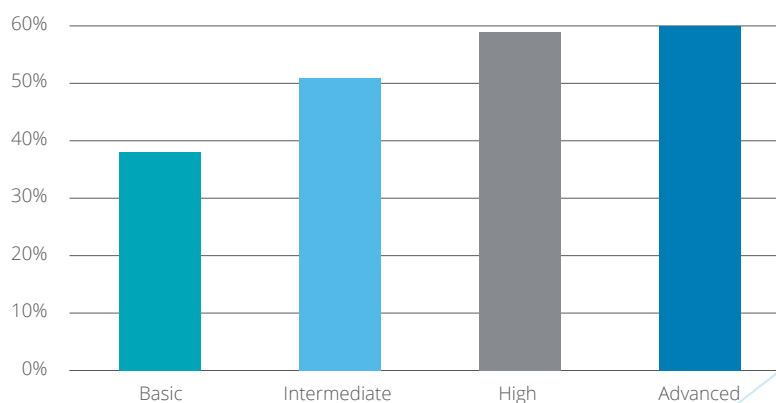
SMBs employ almost half of the private workforce. In this context, SMBs with a more advanced use of digital tools report that they employ, on average, twice the number of people than SMBs with a more basic use of digital tools.

More than 50% of all SMBs have experienced employment growth in the last year. Amongst more digitalized SMBs, 60% have experienced employment growth, which is almost twice as much as for businesses with a more basic use of digital tools.

This result is consistent with previous Deloitte studies²¹, which have also found that small businesses with a more advanced use of digital tools create jobs at a faster pace than other, less digitalized businesses.

In addition, recent research by the OECD²² supports that digitalization opens new opportunities for SMBs to scale up, and ultimately contribute to job creation.

Figure 14. Employment growth in the last year at different stages of the SMB digital journey



Note: A sample of 1,011 SMBs were asked "Has your firm experienced employment growth over the last financial year?"; advanced-to-basic ratios from the survey results on this Figure differ from statistical results reported in this section, which take into account other factors that also affect business performance

Innovation: Around 90% of SMBs report that digital tools have helped foster innovation in their business

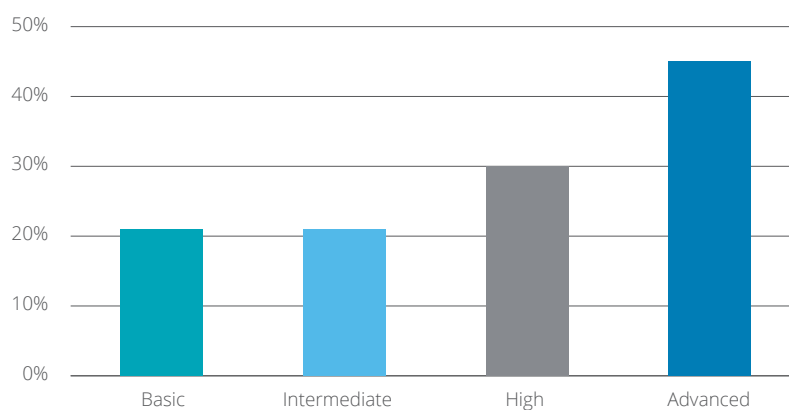
More accessible and cheaper technologies have enabled SMBs to overcome structural disadvantages stemming from resource constraints, strengthen their comparative advantages and improve their competitiveness.

Around 90% of all SMBs report that digital tools have helped foster innovation in their business, particularly with helping to introduce products and services in new markets, communicate with customers more effectively and operate their business more efficiently. In more detail, the analysis of the survey responses suggests that:

- Around 50% of these SMBs state that digital tools have facilitated the introduction of their products and services in new markets.
- Almost 50% also suggest that these tools have facilitated a more effective communication with their customers.
- More than 30% report that these tools have allowed businesses to be more efficient operationally.
- Almost 30% note that these tools have enabled the development of new products and services, which have contributed to the SMBs' financial performance. More than 20% also suggest that helping to develop new products is one of the top three benefits of using digital tools.

SMBs at a more advanced stage on their digital journey were almost three times more likely to develop new products and services that could offer new opportunities for growth in both existing and new markets.

Figure 15. Digital tools facilitate the development of new products or services



Note: A sample of 844 SMBs were asked "Would you say that digital tools have helped foster innovation in your business?"; advanced-to-basic ratios from the survey results on this Figure differ from statistical results reported in this section, which take into account other factors that also affect business performance

These results are broadly consistent with recent Deloitte studies²³, which have also found that small businesses with more advanced use of digital tools are more likely to innovate than less

digitalized businesses. Some earlier studies such as Li et al (2010)²⁴ have also found that digitalization is positively related with new product development, based on a survey of 85 small U.S. manufacturers.

Case study N. 5

Small Marketing Business McLean and San Francisco

The business now

This small marketing business was established 22 years ago as a Public Relations (PR) company and is now based in McLean and San Francisco. The business is recognized as a strategic communications agency that provides marketing, PR, digital strategy and creative services, particularly to B2B and B2G segments in the Information and Technology industry. In 2018, the business **employed 55 people**, made around **\$10 million in revenue**, and the management expects to grow more than 10% in 2019.

Use of digital tools

The business uses a number of digital tools, including a website with **Client Relationship Management** capabilities to engage with customers and implement targeted marketing strategies.

The business also uses **video-conferencing and intranet networks** for communication, and **cloud-based software**, for example, to share information between colleagues working across the US. The business uses **Enterprise Resource Planning** tools for project management purposes, which help with keeping track of deadlines and monitor productivity.

Impact of digital tools

The management team has noted that **digital tools have facilitated the transformation** of the business, which has remained competitive in the Marketing and PR industry for over two decades. Over a decade ago, the business expanded and opened offices in San Francisco. At this point, management introduced cloud-based software to help staff **share information and collaborate effectively**.

No more than five years ago, the company introduced Client Relationship Management tools to improve their marketing and continue to expand as a business, which has worked. Approximately **50% of its new customers come from the company's webpage and the business continues to benefit from healthy double-digit revenue growth**.

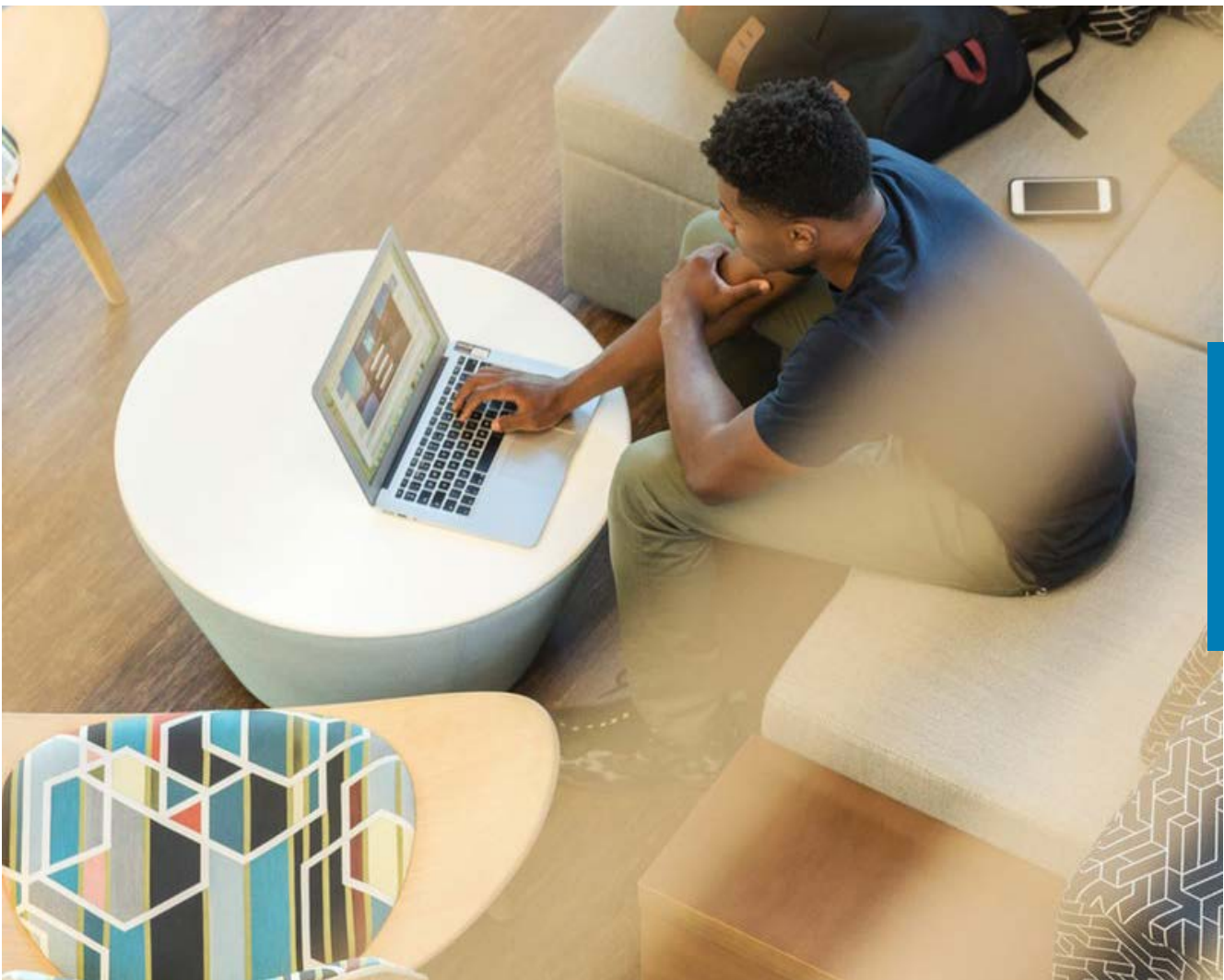
The future

The management team is looking to implement **new, innovative tools** that will generate quantitative insights into the company's performance, in particular, to measure and provide high-quality services to their customers.

Cause and effect

The analyses in this section have evaluated the relationships between increasing levels of digitalization and the performance of SMBs, after controlling for other factors. The report has established that SMBs with a more advanced use of digital tools tend to be higher performing. The analyses have not been conclusive on the extent to which it is the digital tools that lead to a better performance and/or better performance that results in more use of digital tools.

This said, although both of these effects could be possible, the evidence in this report does suggest that there is a contribution of digital tools to improving business performance, for example, by generating more revenue and/or improving profitability. This is shown in the results of this study, including the analysis of the stated impacts and the outputs of the econometric models. One example could be that SMBs report that their use of tools has helped them improve their customer satisfaction, and these SMBs appear to be more likely to experience customer growth. There are other examples presented in this report.



SMBs can advance on their digital journey to great impact if key barriers are addressed

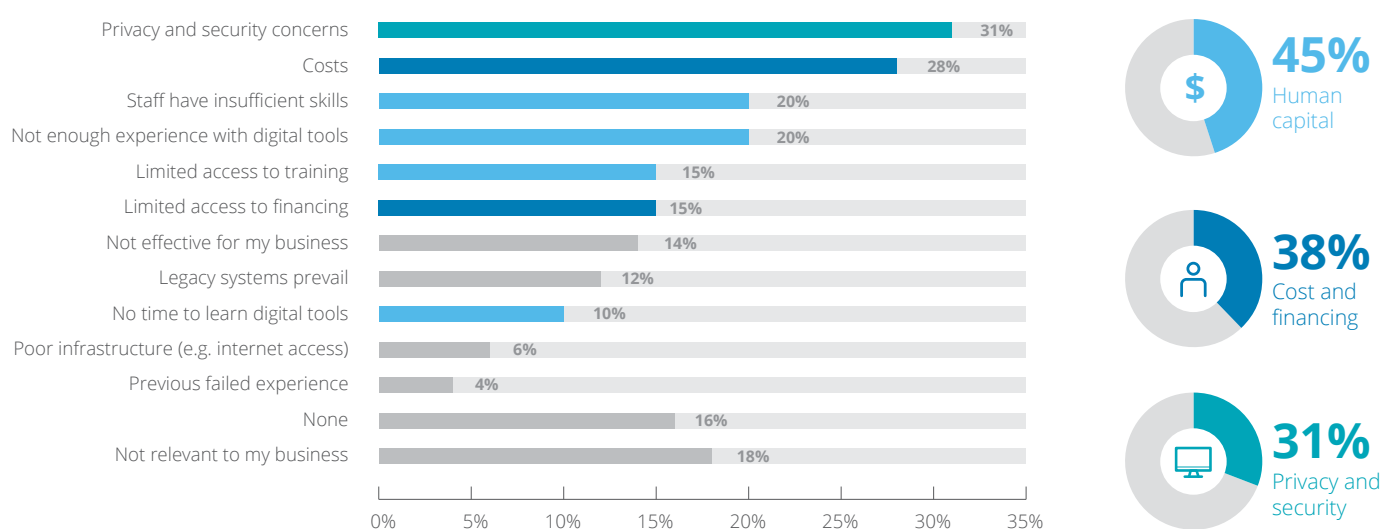
Given the positive effects digital tools have on business performance, it is no surprise that 70% of the SMBs have plans to increase digital tool use in the future, although only a third are looking into the next five or ten years. Having a clear approach for testing and using digital tools is important to remain competitive, particularly when SMBs tend to face digital barriers.

The survey asked SMBs about the top five barriers they currently face as they consider increasing their use of digital tools in their business. The results suggest that more than 75% of SMBs in the U.S. believe they face at least one barrier to increasing their use of digital tools.

This result is aligned with previous studies conducted by Deloitte²⁵, which also found that 80% of small businesses in the U.S. “are not taking full advantage of digital tools [..., which] suggests that there could be barriers that are preventing these business from adopting technologies that could otherwise lead to substantial growth and performance dividends”.

More specifically, Figure 16 sets out the frequency with which SMBs reported specific barriers as part of their top five. The type of barriers faced by SMBs appears to be broadly consistent across businesses with different levels of digitalization.

Figure 16. Barriers faced by SMBs to using digital tools



Note: A sample of 1,010 SMBs were asked “Which of the following barriers to using the digital tools and technologies would you say apply most to your business?”

More than 15% of SMBs note that they face no barriers to using digital tools and around 18% set out that the digital tools or barriers considered in this report are not relevant to their business.

In summary, the answers reported by the SMBs surveyed for this study suggest that the five most common barriers they perceive to using digital tools are:

- Privacy and security concerns
- Costs
- Insufficient skills
- Lack of experience
- Limited access to training

These barriers can be grouped into three key themes: human capital, costs and financing, and privacy and security concerns.

Analysis shows that almost half of the SMBs mention at least one barrier related to the lack of skills, experience, access to training or time to learn, which are likely to be interrelated barriers associated with the human capital needed to use digital tools effectively. A recent study from the OECD (2018)²⁶ suggests that firms should consider investing more in training their employees so that they can realize the full potential of digitalization.

Almost four in 10 SMBs also face barriers associated with costs or limited access to financing. Some digital tools provide innovative business solutions at low costs, which generate new opportunities for SMBs. Other tools may be harder to access for smaller businesses due to the direct and indirect costs of adoption, including legacy costs. Research by the OECD²⁷ mentions that SMBs usually have limited financial resources, which may create a further barrier that may contribute to SMBs lagging behind in their adoption of tools.

More than three in 10 SMBs are concerned with privacy and security issues. According to a recent report published by the international security company Thales²⁸, security concerns vary and include the following:

- security breaches or attacks at service providers of digital tools,
- lack of data privacy policy or privacy service agreement,
- fraudsters using apps,
- exposure of personal identifiable information,
- weak authentication protocols,
- lack of control of where the sensitive information is located, and
- data quality and privacy violations.

For example, in recent years, the sophistication of cyber-attacks has increased dramatically, which has made it more costly for companies to keep all their data and digital systems safe. A survey conducted by the Ponemon Institute²⁹ has found that 61% and 54% of SMBs have experienced cyber-attacks and data breaches, respectively.

These cyber-attacks are costly, e.g. from an average of \$2,157 for a ransomware to more than \$1,000,000 for more damaging, sophisticated cyber-attacks.

Economies around the world have also considered privacy and security issues to be a key barrier to address in their wider digitalization efforts, which has resulted in frequent re-evaluations of their digital security strategies and policies³⁰.

The internal and external barriers that SMBs face appear to limit their ability to increasing their use of digital tools and realizing the full potential of digitalization. Addressing these obstacles may benefit SMBs, as the evidence in this report suggests that increased digitalization is associated with higher SMB revenue growth.



Digital tools such as social media, cloud services, online payment platforms, or online marketplaces, among others, can offer flexible solutions for SMBs to reach a broad customer base and scale-up. In fact, Deloitte's "Connected Small Business US" (2017)³¹ highlights that "digital tools such as cloud services, social media and online payment platforms can provide SMBs with the ability to efficiently scale up their operations and [...] remove obstacles for SMB growth".

A study by Stankovska et al (2016)³² suggests that web 2.0 technologies that facilitate new digital channels, such as online platforms, can reduce SMBs' barriers for technology adoption, including limited access to financing and insufficient skills. Other studies by Deloitte^{33, 34} show that online payment services and third party marketplaces have created new opportunities for SMBs to access and benefit from online trade. Demarco et al (2019)³⁵ produced a study for the European Commission on SMB digital platforms and how they affect business performance, where they report that "digital platforms are often able to dramatically reduce the transaction costs of existing markets". The authors based this on the argument that these

platforms may improve efficiency in the way multiple actors can coordinate and exchange goods and services.

In an illustrative scenario where less digitalized SMBs with more than five employees are able to overcome the internal and external barriers they face, and as a result, they are able to advance on their digital journey, analysis would suggest that the average revenue growth for these average less-digitalized SMBs could increase by 30%. If these SMBs already benefited from an average revenue growth of 2% each year³⁶, advancing on their digital journeys in this illustrative scenario could mean new opportunities to generate additional average revenue growth of around 1%-point or around \$50,000 for the average U.S. SMB of more than five employees.

SMBs play a key role in the U.S. economy, and as they progress through their digital journeys, their growth and success can increase notably. Addressing the internal and external barriers faced by SMBs may enable them to use more digital tools, and offer them new opportunities to increase their size, productivity and profitability, and ultimately, their contribution to the U.S. economy.

Addressing the barriers to using more digital tools faced by SMBs may offer new opportunities to increase their contribution to the U.S. economy

Technical appendix

Survey

Deloitte commissioned Opinion Matters to survey 1,010 SMB owners and senior managers in the U.S. Opinion Matters abides by and employs members of the Market Research Society (MRS) in the United Kingdom. All survey panelists are double opted-in, which is in line with MRS code of conduct and European Society for Opinion and Marketing Research standards.

The interviews took place online, from 22nd May to 3rd June 2019, using a stratified sample that had been pre-profiled and subsequently re-screened by Opinion Matters. The interviews were available both via desktop and mobile application and utilized a number of large survey panels that provided access to millions of small businesses based in the U.S. and their owners and senior decision makers.

The survey sample contains SMBs with different characteristics, from a range of economic sectors of the U.S. economy, and from across the U.S. geography. In particular, more than 15% of SMB respondents were from the West, over 22% from the Midwest, around 27% from the Northeast, 25% from the Southeast and a final 10% from the Southwest of the U.S. This is a similar geographical breakdown to that of the total number of SMBs with more than 5 employees in the U.S.³⁷

The survey asked SMB, Owners, Chief Executive Officers, Chief Financial Officers, Chief Information Officers, Chief Strategy Officers, and/or other Senior Managers questions about their level of engagement with various digital tools, business performance as captured by e.g. revenue and employment growth, and general business characteristics such as maturity, industry and location. In addition, the survey asked SMBs about whether and how digital tools may contribute to their own business.

Deloitte employed statistical techniques on the survey data to test whether these characteristics vary with the degree of digital engagement.

Classification

Each SMB is classified into one of the four levels of digital engagement based on their answers to 20 questions about their use of digital tools.

The classification is carried out using a two-step process based on Ding, C. and He, X.³⁸ First, Principal Component Analysis (PCA) was used to reduce the number of dimensions, i.e. questions, to consider for the classification of business; second, K-means clustering was employed to group businesses into groups, which have the most similarities in their use of digital tools.

PCA is a widely used technique to reduce the dimensions that are relevant on a particular topic –i.e. digitalization– in a dataset. In this case, the study used PCA to explore the 20 relevant questions about digitalization and reduce these down to 12 principal components. Each principal component is a linear combination of the 20 questions and all of them combined explain most of the variance in the dataset.

K-means clustering is a widely used, unsupervised learning algorithm that subdivides data points of a dataset into clusters, i.e. the SMBs in the survey into the four stages of the digital journey, by grouping data points that are closest to each other across each of 12 dimensions. To do so, the algorithm carries out the following iterative process³⁹:

1. Assign to each point, i.e. SMB, a similar center or group.
2. Identify the centroids of each group, i.e. its characteristics.
3. Reassign each SMB based on the minimum distance to each centroid.
4. Identify new cluster centroids.
5. Reassign each SMB to a similar group.
6. Repeat 1 to 5 until there is no further reassignments that can reduce within-cluster distances from each point to the center of the cluster. That is, SMBs within a group/ cluster are as similar as possible relative to the average characteristics of each group.

Technical appendix

Econometrics

Deloitte developed a two-stage process based on Analysis of Variance (ANOVA) and a series of econometric models to analyze the relationship between different levels of digital engagement and business performance.

The ANOVA procedure is a commonly used statistical technique for testing differences between group means in a sample. In our case, ANOVA was employed to test whether there are statistically significant differences between levels of digitalization and key business performance indicators, such as customer growth, revenue growth, profitability, employment growth or innovation.

The study employed other econometric models, such as linear regression models (e.g. Ordinary Least Squares) and logistic regression models, to isolate and quantify the relationship between SMBs' digital engagement and key performance indicators, while controlling for other relevant factors.

The underlying characteristics of the data determined our econometric modelling approach – linear models for continuous variables and logistic models for categorical values. The

survey contains indicators with categorical and continuous data. Categorical variables result from questions where the possible answer is either 1 or 0 or a range, such as for revenue growth where respondents were asked to select from a few ranges. Continuous variables are questions such as profit, where respondents have been able to provide a specific numerical answer.

This study applies a combination of linear regression models for continuous variables and logit regressions for categorical variables in order to estimate and isolate the impact of their use of digital tools on key performance indicators.

Model validation

A series of statistical tests were carried out to validate that all models are aligned with the underpinning theoretical assumptions and the nature of the data. In the case of linear models, the tests check for the normality of residuals, homoscedasticity and absence of multi-collinearity and autocorrelation. In the case of logistic models, the tests calculate the confusion matrix, the accuracy of the model, the Receiver Operating Characteristic (ROC) Curve, the area under the ROC curve (AUROC) and absence of multi-collinearity.

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