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Brexit Report - Impact on Business Models of Scottish Companies

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Brexit Report – Impact on Business Models of Scottish Companies - June, 2018

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The research proposition: Scottish companies can adapt to changing Brexit market conditions by taking advantage of their business model's dynamic capabilities* to enhance international growth and develop new competitive advantages.

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1. Executive Summary

The Brexit Business Model Report is a preliminary assessment of research, interviews and survey results regarding the impact of Brexit on the business models of Scottish companies as they prepare for post-Brexit scenarios. The survey was used to compile data to support research questions gathered during the research and interview process for this graduate class project. Questions were designed to assess how Brexit is impacting the ability of Scottish companies in the areas of business model, contingency planning, supply chain, staffing, innovation, global reach, risk assessment, and opportunities. The questions reflected areas of the business model that may have present and future implications. The answers help measure the Brexit impact on Scottish firms' business models and the potential for international growth.

The upper management of Scottish companies from the "Insider Top 500" list, "FactSet list, and various trade organizations were selected to receive the survey. The focus of this study was on the potential impact of Brexit on Scottish companies' business models. The survey findings show the importance of understanding the elements of a business model in the Brexit context (see table below and report findings).

Business Model Brexit Implications on Scottish Companies based on Key Findings

Your Business Model	Brexit Implications	Key Findings
Value Proposition Strategic Assets/Resources Dynamic Capabilities & Processes	<ul style="list-style-type: none"> A. Conduct Periodic Reviews to determine if Brexit is impacting your ability to deliver your value proposition. B. Determine if your resources, capabilities and processes will remain sufficient under Brexit. C. Develop unique processes to maintain competencies. 	<ul style="list-style-type: none"> 1. Reviewing Business Models is a high priority (86%) 2. Clear understanding of the Value Proposition and its close alignment to competencies is critical to success (71%) 3. Maintaining competencies through innovation is important (72%)
Cost Structure Revenue Streams Profitability	<ul style="list-style-type: none"> A. Explore financial resources to improve capabilities. B. Consider new global strategies to generate revenue streams. C. Review financial and operational metrics. D. Assess your ability to innovate under Brexit. 	<ul style="list-style-type: none"> 1. Sufficient financial resources is key to improving capabilities (57%). Ability to borrow capital will not be significantly affected under Brexit (71%) 2. International growth under Brexit will lead to investing in new markets (62%) 3. Using business model metrics to measure performance is important (86%) 4. Brexit is intensifying the need to innovate (50%) to drive profitability (63%)

2. Acknowledgements

We are very thankful to all who participated in this timely study. In particular, Christine O’Neill, Partner and Chairman of Brodies LLP, and Paul Atkinson, Founding Partner of Par Equity for meeting with us and for sharing their vision, leadership, and guidance on survey expectations, deliverables and outcomes. We are also appreciative of the discussions with faculty, staff and students at Edinburgh Napier University in particular Maureen Ronaldson of the School of Computing & Engineering, Professor Mammed Bagher and Dr Naomi Graham of the School of Business, Director Julie Brooks of St Andrews University, and the University of Edinburgh. Most importantly, we thank the Providence College School of Business Dean Sylvia Maxfield and Assistant Dean Jackie Elcik for their support of this initiative. We thank those who responded to the survey for their engagement and belief in the importance of the business model to understand the impact of Brexit. Thank you for sharing your insights.

3. Introduction

Purpose of the Study

The purpose of this exploratory study was to collect preliminary data to better understand the impact of Brexit on Scottish firms’ business models. The study included research, in-person interviews in Scotland, and the development of a survey that included 9 sections and 60 questions focused on strategic priority areas to help measure the Brexit impact.

Research Proposition/Question

Can Scottish companies adapt to changing Brexit market conditions by taking advantage of their business model’s dynamic capabilities to enhance international growth and develop new competitive advantages? The survey questions serve as a basis for greater understanding of how Scottish firms use their business model in the strategic management of their firms to meet the Brexit challenge.

Assumptions and Limitations

Given the lack of precedent surrounding the exit of any country from the EU, and few academic papers on Brexit, the assumption was made that firms would use the various elements of their business models to adapt to the Brexit landscape. The study represents a pilot test as a form of beta-testing narrowly focused on a preliminary sample of only Scottish firms. This is the first study by a US Business School (Providence College School of Business) that examines the impact of Brexit utilizing a team of eight graduate students as researchers with a structured program by a graduate faculty global fellow to conduct an empirical investigation with international interviews followed by a qualtrics-based survey that brings together the capabilities and knowledge of industry and academia.

Definition of Key Terms

Business Model: a company’s method of operations based on their value proposition, strategic resources, dynamic capabilities & processes which support their cost structure and revenue streams to achieve profits. These key elements of the business model allows for the monetization of a company’s operations.

Dynamic Capabilities: a company’s capacity to effectively reconfigure the use of key resources to successfully implement new strategies.

4. Methodology

Survey Preparation: the research team met with Scottish companies from the 2017 INSIDER Top 500 as well as students and faculty at two universities, economic development agencies, an HR firm, a VC firm and a Law firm all located in Edinburgh providing invaluable information and insights to assist in refining the initial Brexit Business Model survey. Several Scottish trade associations were contacted resulting in meetings and discussions with management that provided additional input for development of final survey questions.

Survey Confidentiality: letters and emails were sent to selected companies regarding the survey. These companies were chosen from the FactSet list of public and private Scottish companies as well as the list cited above. The academic pledge of confidentiality and anonymity was stipulated to survey respondents.

Data Collection: an appropriate sample was selected which consisted of a group of companies from both the manufacturing and service sectors in a variety of industries with a minimum of 100 employees to a maximum of 5000 employees including corporations and partnerships. The logic for choosing this population was that the qualitative and quantitative data sought needed to come from a distribution of firms, in this case Scottish firms (either headquartered in Scotland or having a presence in Scotland but headquartered in another country) to serve as a base line and a platform for subsequent UK samples and analysis as Brexit evolves.

Data Analysis: there were eight sections to be analyzed including: Brexit and your business model, risks and opportunities, contingency planning, supply chain, staffing, innovation, global reach, and business model drivers. Each of the eight graduate students analyzed one section and the faculty-in-charge provided additional editorial content analysis.

Conclusions: this exploratory study which included Brexit and Business Model research, interviews, and survey development, led to important findings reported in eight separate sections with independent conclusions. The eight sections reflected strategic priority areas that serve as a basis to identify, assess and address Brexit consequences.

5. Survey Analysis and Findings

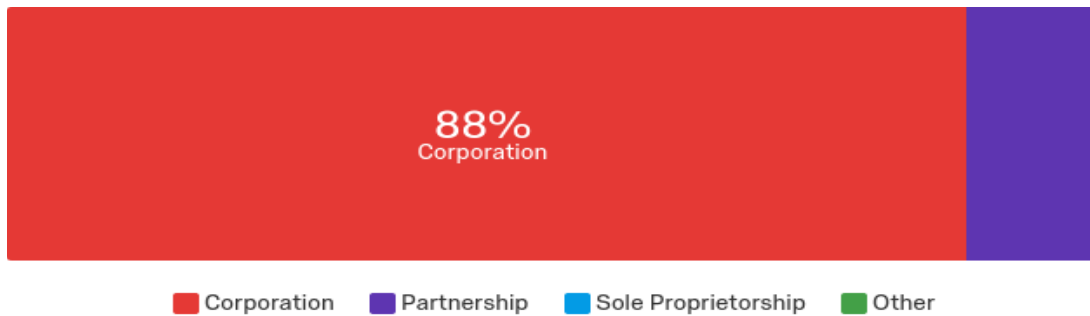
Section 1 – Survey Participants/Company Characteristics – David Hansen

Respondents:



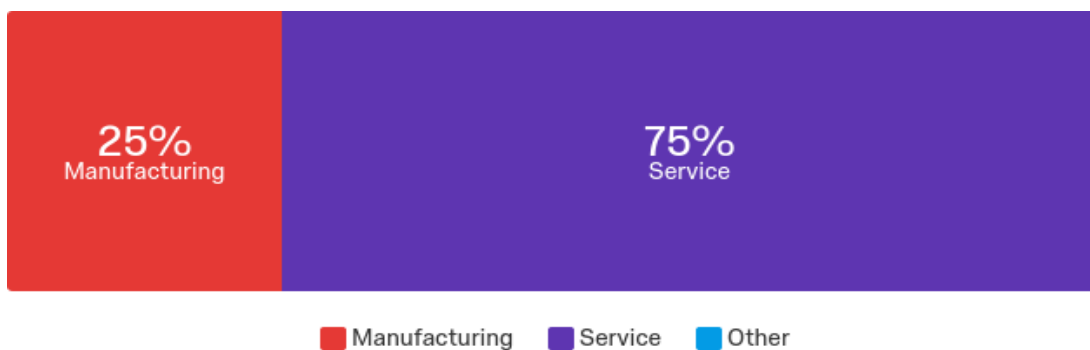
Finding: Respondents were from Upper Management and Owner/Partner offering perspectives into the corporate mindset and direction of each company.

Company Structure:



Finding: Respondents were either from Corporations or Partnerships.

Company Sector:



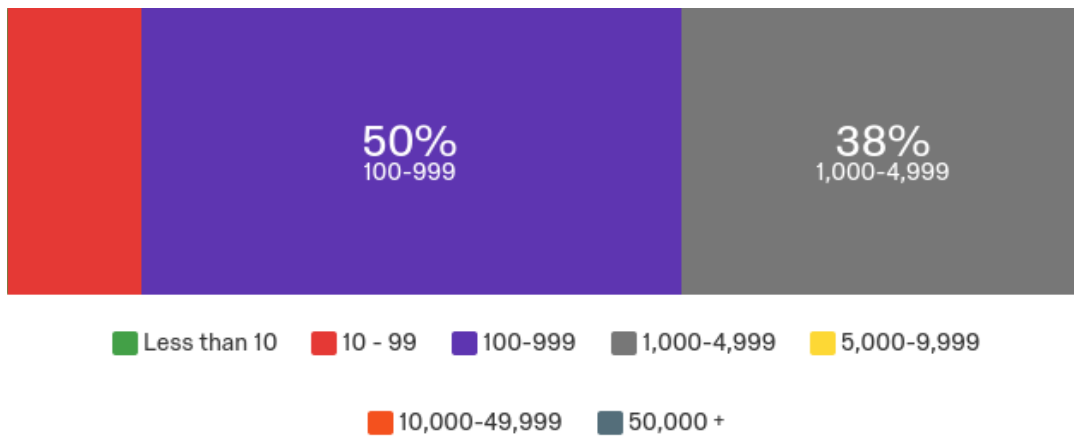
Finding: Survey Participants were predominately (75%) from the service sector.

Industry:

Finding: Respondents were from a range of industries including

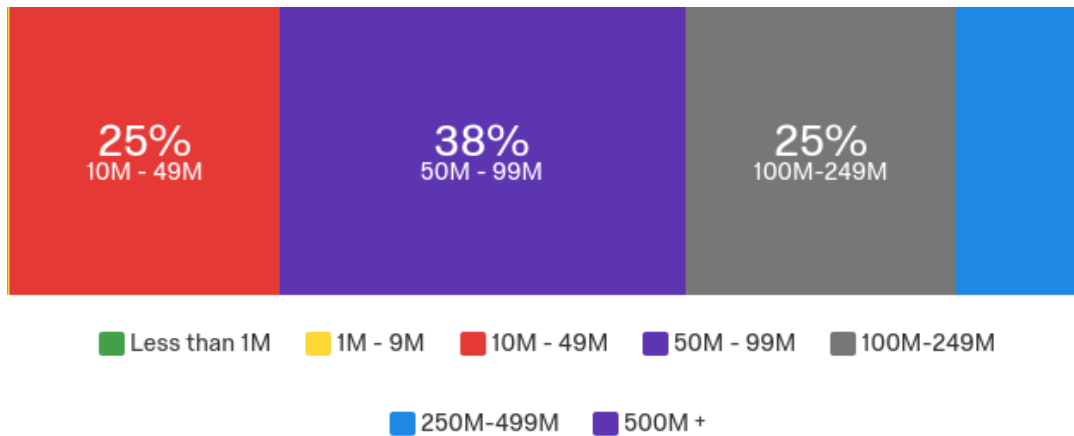
- Construction
- Consumer Healthcare/Pharmaceuticals
- Global Outsourcing
- Electronics
- Legal Services
- Recruiting Services
- Retail Operations
- Venture Capital

Number of Employees:



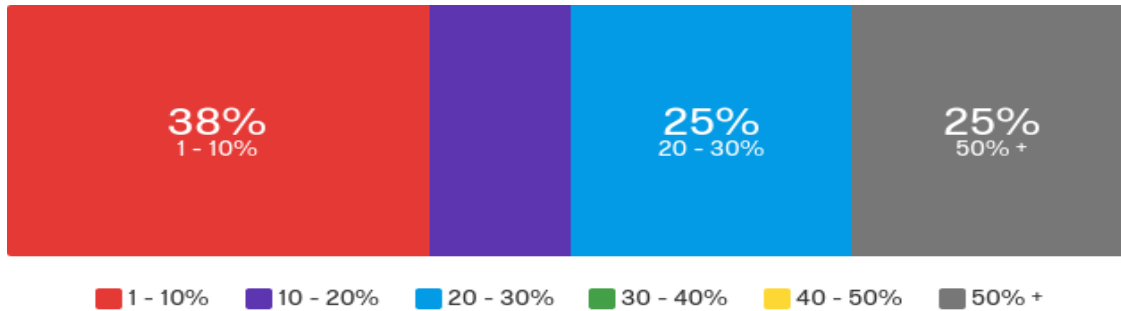
Finding: 50% of respondents have between 100 and 999 employees, while 38% have between 1,000 and 4,999 employees.

Total Sales/Turnover:



Finding: Respondents have total sales/turnover in excess of \$10 million but no more than \$499 million.

% of International Sales (outside UK):



Finding: 38% of respondents have between 1-10% of International Sales (outside of the UK). 25% of respondents have 20-30% of sales outside of the UK and 25% have over 50% of sales from outside of the UK. This may have an impact on how these companies respond to the questions associated with Brexit.

Conclusion on Survey Participants and Company Characteristics

The upper management of Scottish companies were invited to participate in this survey. Respondents included CEOs, Partners/Owners and members of Senior Management. Survey respondents offered insights into corporate mindsets as upper management begins to consider addressing Brexit issues that may possibly affect their business models. As Brexit approaches, the project research along with in-person interviews supported survey findings that company structure, industry sectors and size mattered.

Section 2 – Brexit and Your Business Model – Brendan Smith-Wilks

Findings:

- Q 1.** 87% of the respondents stated that reviewing their business model is a high priority.
- Q 2.** 87% of the respondents find reviewing their business model important.
- Q 3.** All survey respondents stated that their management team fully understands the company's value proposition.
- Q 4.** 50% of respondents strongly believe that they have sufficient resources and capabilities to continue to deliver their company's value proposition under Brexit.
- Q 5.** 63% of respondents strongly believe that they have sufficient financial resources necessary to improve their capabilities.
- Q 6.** Reducing current costs due to the uncertainty of Brexit is the opinion of 25% of respondents.
- Q 7.** 50% of respondents believe their company's economic model (cost structure, revenue streams, profitability) is likely to remain stable regardless of Brexit.

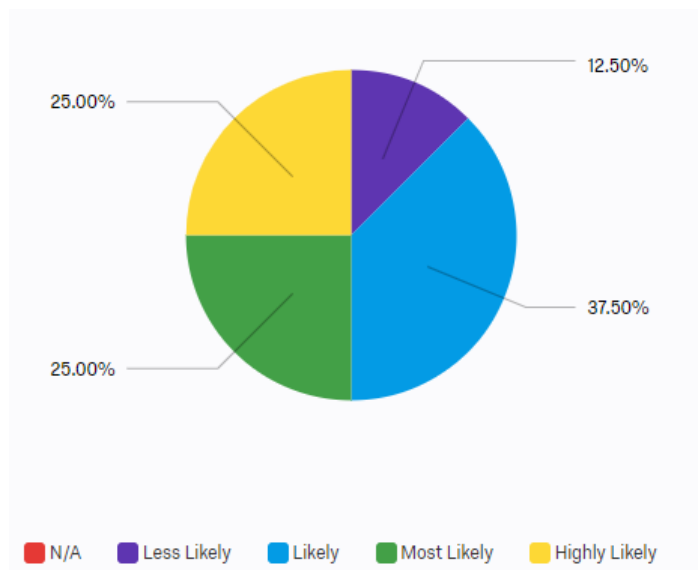
Q 8. 50% of respondents stated that Brexit is less likely to affect they businesses' ability to borrow capital.

Q 9. It is the opinion of 63% of respondents that a hard Brexit can lead to lower revenues.

Q 10. It is the opinion of 50% of respondents that a soft Brexit can lead to stable or higher revenues.

Conclusion on Brexit and Your Business Model

The decision by the United Kingdom to leave the European Union has caused a lot of uncertainty for businesses in the UK. According to this study, many businesses in Scotland are taking a proactive approach and reviewing their company's current business models which they believe is an important step to take. This strategy will help businesses identify any areas of weakness in their current business model resulting from Brexit. In addition to the survey, several businesses in Scotland were interviewed. The results suggest that businesses are taking the necessary steps to review their business models in the wake of Brexit. Ensuring that their business can continue to operate is a high concern with the full implications of Brexit still unclear at this time. The ability to be flexible and adapt their company's business model to any new changes that result from Brexit will help businesses maintain and/or enhance performance.

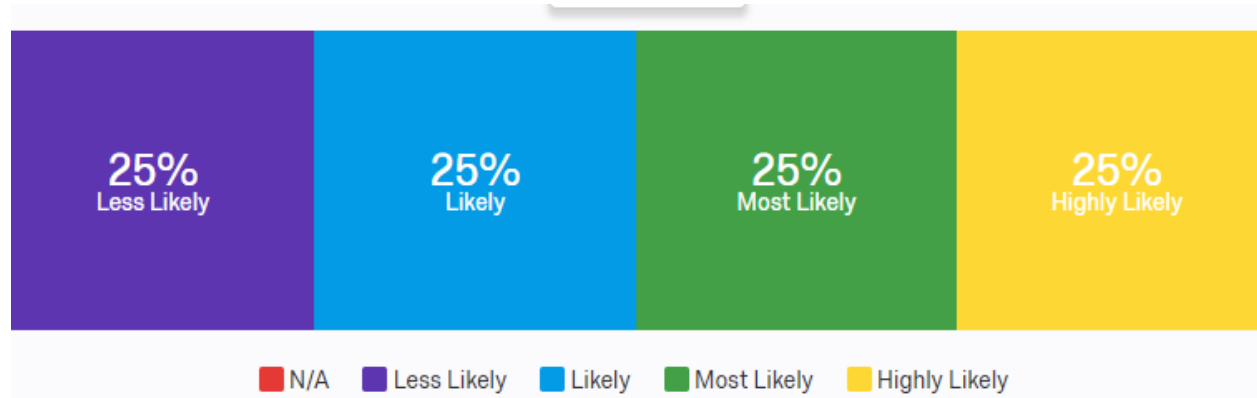


Q 2. We consider periodic reviews of our business model important.

Along with examining their business models, businesses in Scotland are also examining their current resources. This study found that 43% of respondents strongly believe that they have sufficient resources and capabilities to continue to maintain their company's value proposition. The uncertainties surrounding Brexit has led many companies to examine their resources as a key element of their business models. Many global businesses have or are considering moving their operations to their other facilities in other European Union countries. However, businesses that only operate in the United Kingdom have a more difficult challenge if they rely on resources outside of the UK. Manufacturing businesses that rely on materials from countries in the EU are at risk of not being able to continue their operations. Many of the farming and agriculture jobs in the UK are done by EU nationals and it has become very difficult for these businesses to find workers since the Brexit vote. Also, some of the universities in the United

Kingdom have seen a drop in the percentage of international students enrolled at their university. Many of the university faculty are EU nationals who are uncertain about their future in the UK. As a result of the worker and other resource constraints, the United Kingdom has seen a sharp rise in the number of people applying to become UK citizens from EU nationals living in the country. The uncertainty surrounding the availability of a company's resources in the future as a result of Brexit is why some businesses feel that they may not have sufficient resources to continue to maintain their value proposition.

Q 4. We have sufficient resources, capabilities and processes to continue to deliver our value proposition under Brexit.



Section 3 – Risks and Opportunities – William Kalinowski

Q 11. We are able to identify and manage risks introduced by Brexit.

Finding: 75% of respondents are able to identify and manage Brexit risks.

Q 12. Brexit uncertainty is creating a negative outlook to do business with EU companies.

Finding: 50% of respondents believe that Brexit uncertainty is creating a negative outlook for doing business with the EU.

Q 13. We take a reactive approach to Brexit.

Finding: 88% of respondents do not take a reactive approach to Brexit.

Q 14. We seek ways to identify and understand Brexit opportunities.

Finding: 88% of respondents are trying to identify and better understand Brexit opportunities.

Q 15. We believe Brexit will provide our firm with merger and acquisition opportunities.

Finding: 50% of respondents believe Brexit will result in M & A opportunities.

Q 16. We see positive opportunities for growth in our industry post Brexit.

Finding: 75% of respondents see positive opportunities for growth post Brexit while 25% feel less optimistic.

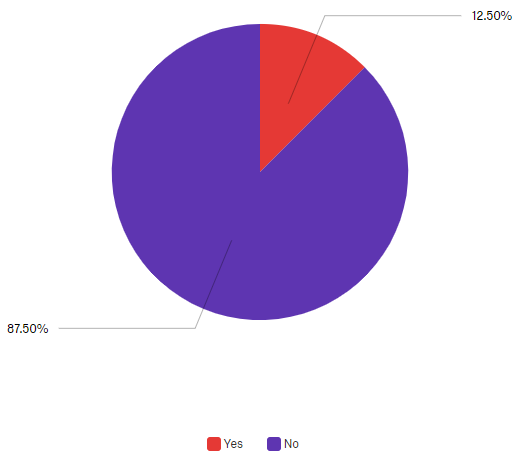
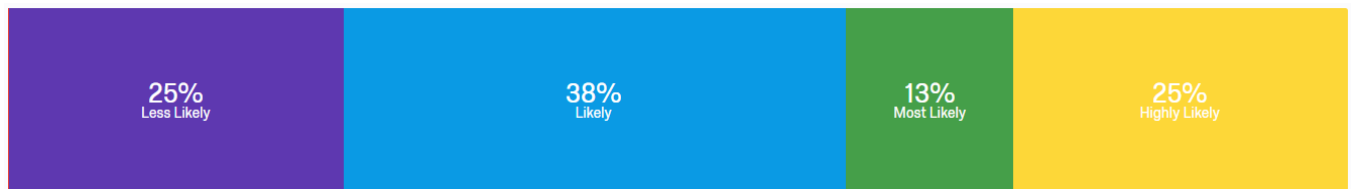
Q 17. We take a proactive approach to Brexit.

Finding: 75% of respondents take a proactive approach to Brexit

Conclusion on Risks and Opportunities

The risks and opportunities section of this survey offers us great insight into how companies across Scotland are approaching Brexit given their risk profile. From discussions with Scottish company leaders, it is apparent that Brexit will have a different impact on different industries. For some it will likely lead to more business opportunities especially in the service sector and for others it will offer opportunities to explore M&A activities as the details of Brexit negotiations become clearer. Survey responses in this section highlight that a majority of survey respondents see positive opportunities for growth. From Figure 1, we can see that 75% of respondents feel likely to highly likely that Brexit presents positive growth opportunities in their industry. This result is comparable with what we learned while talking to various companies and individuals in Scotland.

Figure 1: *Q16 - We see positive opportunities for growth in our industry post Brexit.*



Another impactful result from the risk and opportunities section is on whether companies take a proactive or reactive approach to Brexit. From Figures 2 & 3, we can see that the majority of respondents take a proactive approach to Brexit. While many of the outcomes and business impacts are still unknown, many companies are preparing for what they can control. Results demonstrate that companies do not want to take unnecessary risks. While a lot is still unknown, it is a positive sign to see that most companies are being proactive and hedging their risks.

Figure 2. *We take a reactive approach to Brexit.*

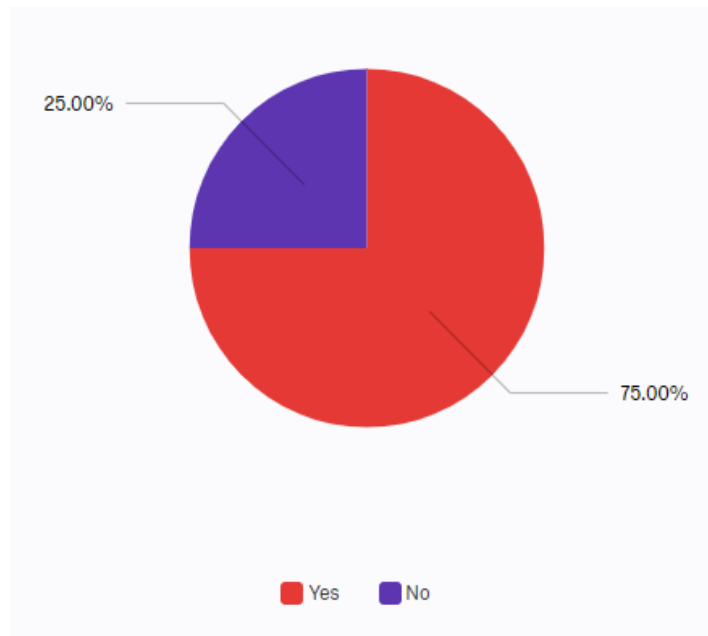
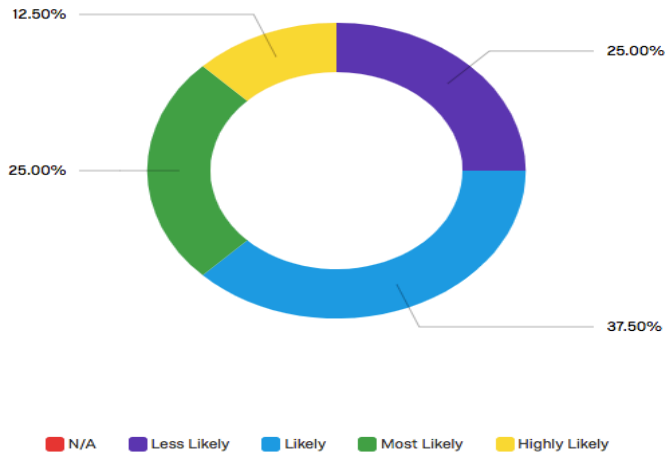


Figure 3: We take a proactive approach to Brexit.

Section 4 – Contingency Planning – Kelsey Napolione

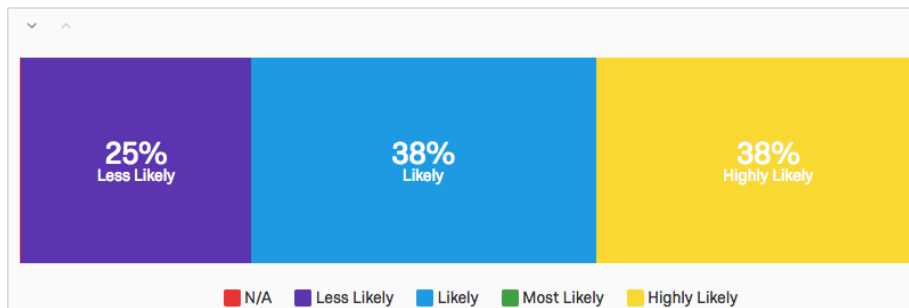


Q 18. We are engaging in scenario development to adjust our business model capabilities for post Brexit.



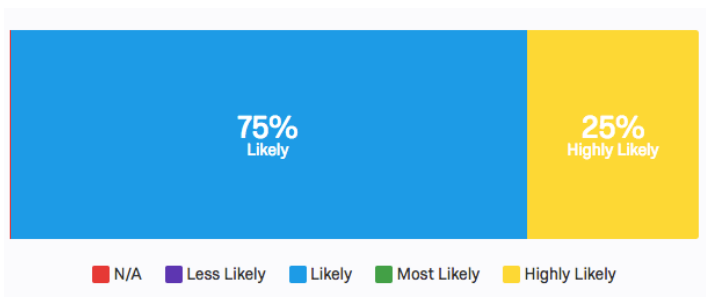
Finding: Although survey answers range from less likely to highly likely – 75% are planning to adjust their capabilities for post Brexit.

Q 19. We have or will have legal professionals help us develop Brexit scenarios.

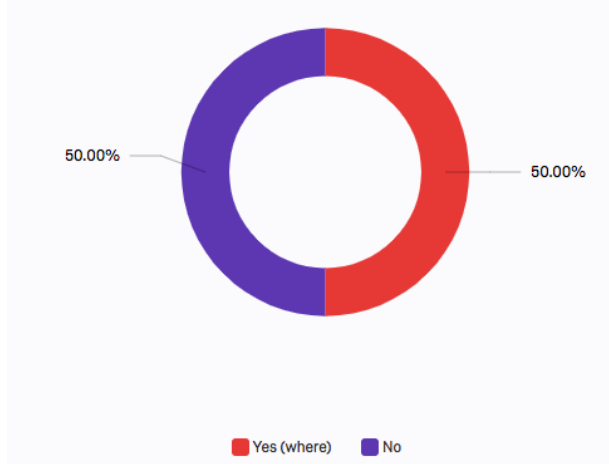


Finding: The majority of companies surveyed are taking or will take action to engage legal and HR professionals to deal with Brexit issues.

Q 20. We have or will have HR professionals to help us develop Brexit scenarios.

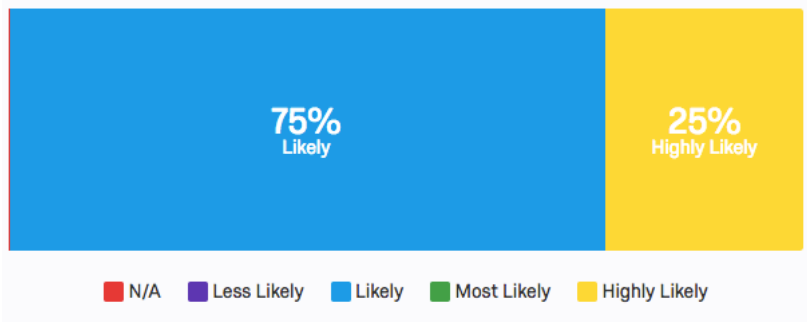


Q 21. We are considering opening a facility office outside of the UK. (Yes/No)



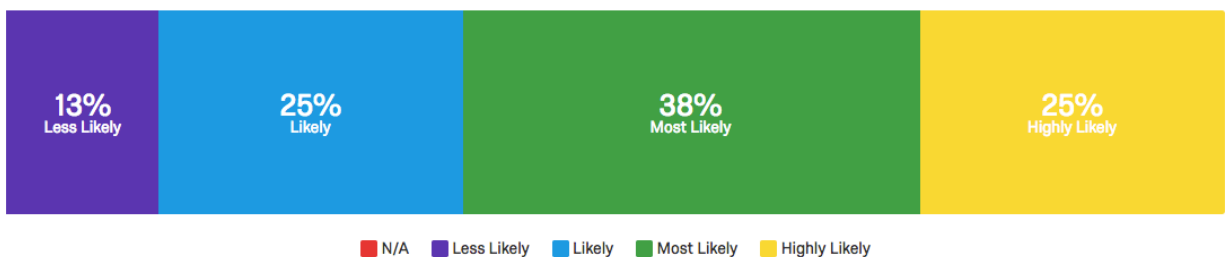
Finding: 50% are looking to open a facility outside of the UK as a result of Brexit. Location responses included Belgium, Germany, Holland, Ireland and New Zealand.

Q 22. It is important to us to belong to trade organizations that are able to inform us and influence the Brexit negotiations.



Finding: Although there is a great divide over the merits of Brexit, the results suggest that companies will be looking to Trade Organizations for input.

Q 23. We are actively responding to the needs and concerns of our clients/customers regarding Brexit.



Finding: The responses show that 63% of the companies, due to Brexit, are highly focused on the needs and concerns of their clients/customers.

Conclusion on Contingency Planning

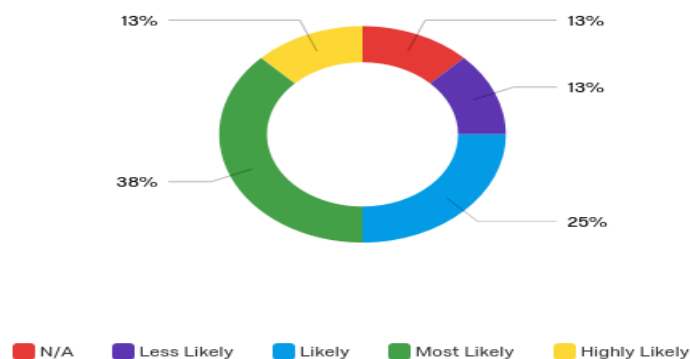
This section of the survey was titled Contingency Planning as it related to any measures being taken for various unknown outcomes of Brexit. It consisted of 6 related questions. One of the questions surrounding opening new locations throughout the European Union helped to solidify some of the initial survey research as well as in-person discussions with business leaders in Scotland. One of the more proactive approaches that some businesses were taking included opening an office elsewhere in the EU that could become the headquarters if doing business with the EU became less effective from their current office. The results of the survey support this decision as 50% of the respondents were considering taking action on the relocation issue. Potential difficulties of trading across EU/UK borders included processes becoming inefficient and costlier. When various companies were interviewed in Scotland, opening a new office revealed that relocation/expansion was a real and viable option for them. Many noted Dublin as a strong prospect for Scottish-based companies due to its close proximity and the fact it would be unaffected by Brexit negotiations in terms of its relationship with the rest of the European Union.

The other key finding that is important to focus on includes a much more mixed result than the previous one. Question 22 of the survey asks about trade organizations, and how important it is for companies to belong to an organization that can influence Brexit decisions. Based on their business model, they may be able to adapt accordingly and not look to influence Brexit decisions but rather react to the results of Brexit negotiations. As a result of interviews in Scotland, this was confirmed first hand.

This section regarding contingency planning highlights the many uncertainties (economic, political, legal, social, operational) that companies are facing. As the previous page indicates, many of the questions showed mixed responses which confirmed research and articles reviewed for this study. When it comes to planning for an event like Brexit, there are many contingencies. Companies with greater resources and a focus on their business model capabilities will likely take a pro-active approach, others may choose to monitor developments before committing resources. Regardless of their positions, Brexit has left many Scottish companies unsure of the future and anxiously anticipating the results of Brexit negotiations.

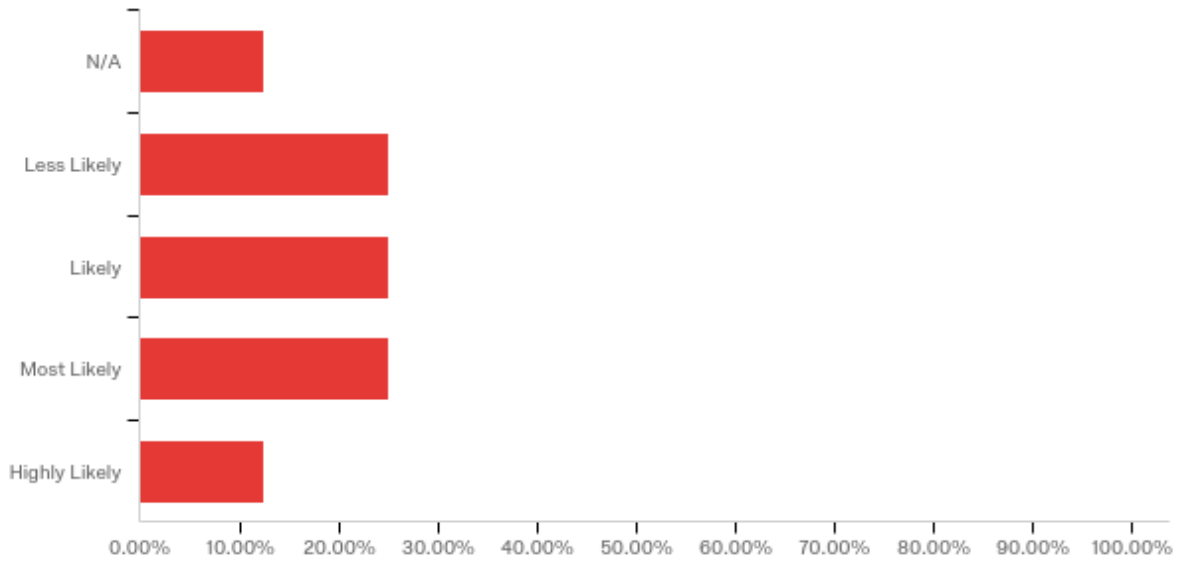
Section 5 – Supply Chain – David Hansen

Q 24. We are taking proactive measures to assure firms within our supply chain that we are capable of adapting to post-Brexit scenarios.



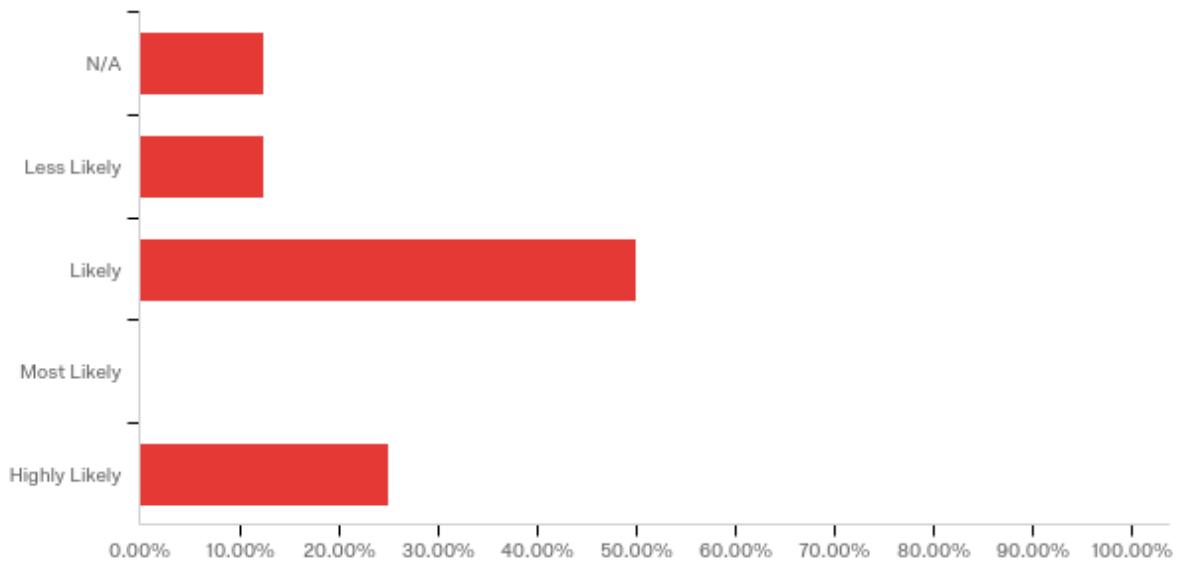
Finding: 51% of participants are taking proactive measures within their supply chain for post Brexit scenarios.

Q 25. We are seeking specific input from our supply chain partners to help us adjust to Brexit challenges.



Finding: Answers to this survey question established that more than 50% of the respondents are seeking specific input from their supply chain partners to help them adjust to Brexit challenges.

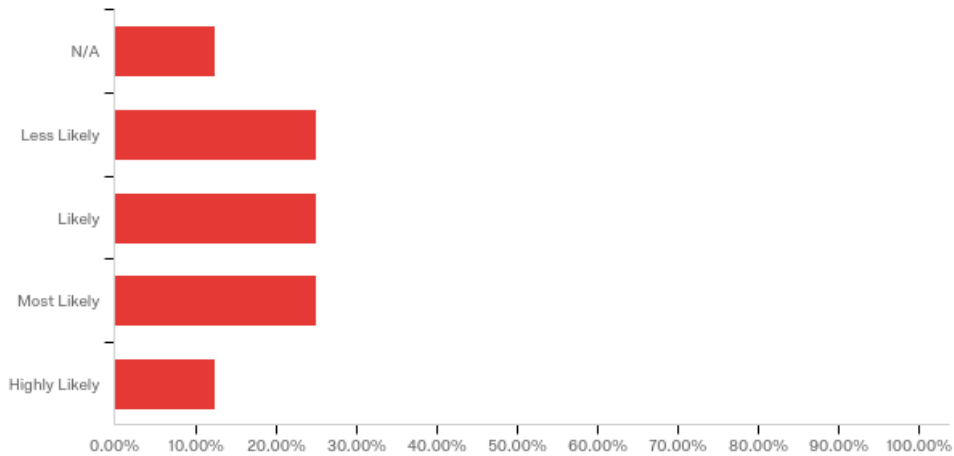
Q 26. We are actively identifying potential back-up supply chain partners.



Finding: 75% of respondents are likely to be actively identifying potential back-up supply chain partners consistent with other findings in our research.

Conclusion on Supply Chain

The graph below shows the evenly distributed responses to the question/statement: “We are seeking specific input from our supply chain partners to help us adjust to Brexit challenges.” It appears the uncertainty of trade and immigration issues is leading companies to take different measures, both proactive and reactive, as they prepare their businesses for Brexit.



Section 6 – Staffing – Roy Marshall

Q 27. The potential skill shortages under Brexit will disrupt our business model.

Finding: 87% of the respondents believe that the potential skill shortages under Brexit will disrupt their business model.

Q 28. We are speaking with our employees to mitigate their concerns of the Brexit impact on their job security.

Finding: 50% of the respondents are highly likely to speak with their employees about their job security concerns. 50% are taking a reactive approach and are less likely to speak with their employees about their job security over Brexit.

Q 29. Brexit will negatively impact our employees’ job security.

Finding: 100% of the respondents believe Brexit will not impact their employees’ job security.

Q 30. Brexit will result in the layoff of employees.

Finding: 100% of the respondents believe Brexit will not result in layoffs.

Q 31. The hiring of new employees will cause our labor costs to increase.

Finding: 62% of the respondents do not believe that labor costs will increase as a result of Brexit.

Q 32. We have created incentives for UK employees to remain with our company.

Finding: 50% of the respondents are less likely to create incentives. 50% chose not to respond.

Q 33. We are taking proactive measures to retain employees from the EU.

Finding: 75% of the respondents feel that they do not need to take proactive measures to retain employees from the EU.

Q34. Our company has other locations in the EU and around the world to meet the potential need for employee relocations.

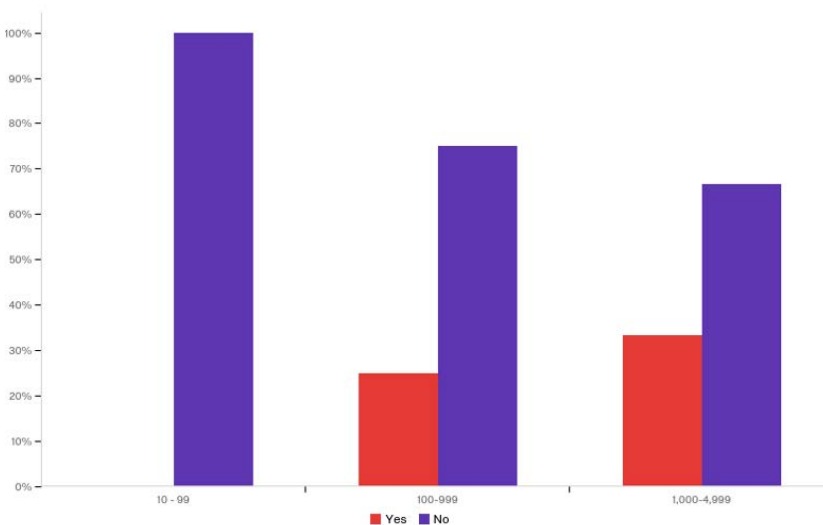
Finding: 75% of the respondents do not have other locations in the EU or around the world to relocate employees.

Conclusion on Staffing

Section 6 on staffing discusses how Brexit will affect employees. The data collected from the survey on company characteristics (see Section 1) assisted in correlating size and type of companies with their survey responses on staffing. Responses from smaller companies (workforce between 10 - 99 employees) in the fields of construction, recruiting, and legal services indicate that neither they nor their current or future employees are likely be affected by Brexit. Smaller companies show less concerns of the impact of Brexit on their workforce. Most of those companies' business models appear to be adaptable and may benefit from Brexit even though they do not have other locations around the world to meet the potential need for employee relocation (Table 1).

Table 1

34 - Our company has other locations in the EU and around the world to meet the...



Companies with a workforce between 1000 – 4999 employees show that they are more proactive towards Brexit. They are taking the opportunity to speak with employees to mitigate the concern of their job security (Table 2) and have stated that Brexit will not likely result in employee layoffs (Table 3). Given

that they are larger entities within their industry and have the resources, they can anticipate, plan and adjust to Brexit conditions.

Table 2

32 - We have created incentives for UK employees to remain with our company.

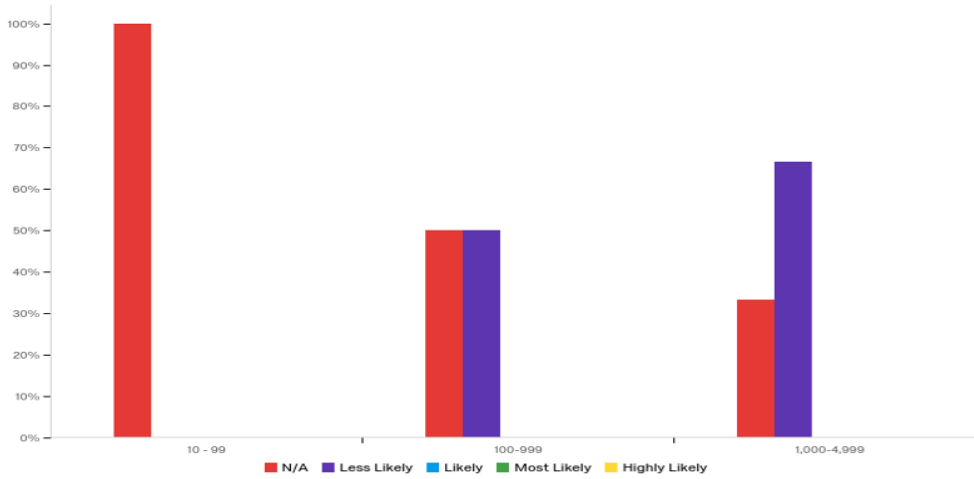
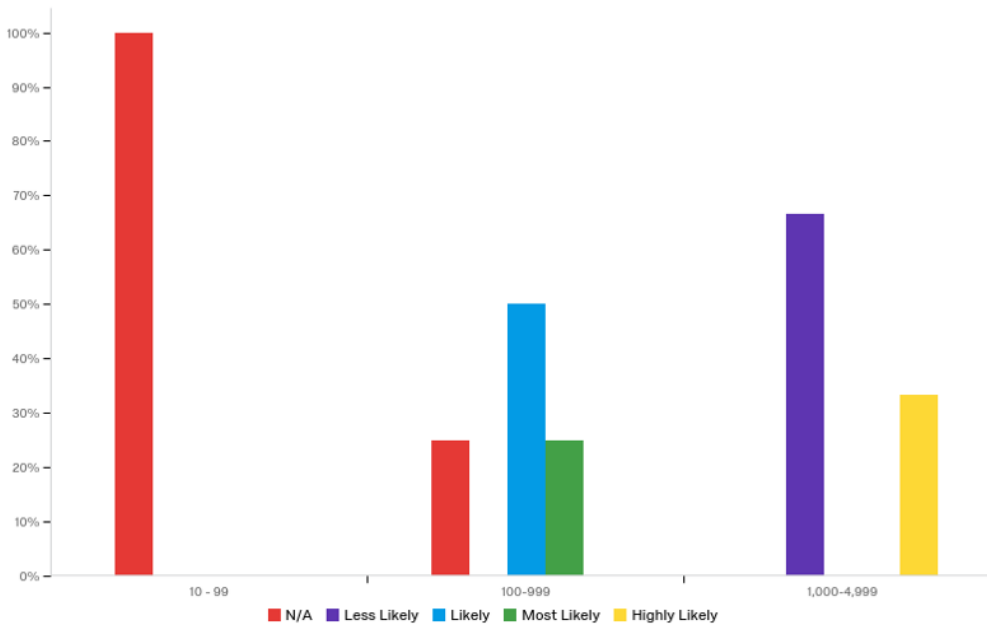


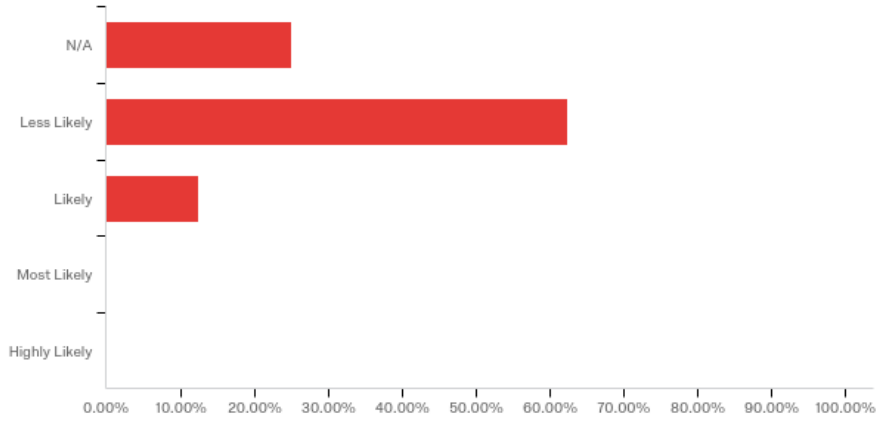
Table 3

33 - We are taking proactive measures to retain employees from the EU.



Section 7 – Innovation – Peter Kokias

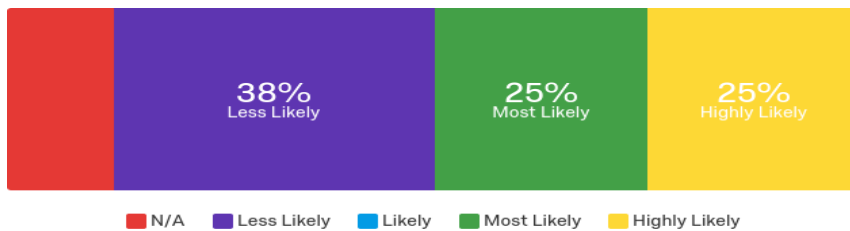
Q 35. Our R&D function is affected by Brexit.



Finding: 75% of respondents stated that Brexit will not affect their Research and Development function.

#	Answer	%
1	N/A	25.00%
2	Less Likely	62.50%
3	Likely	12.50%
4	Most Likely	0.00%
5	Highly Likely	0.00%
	Total	100%

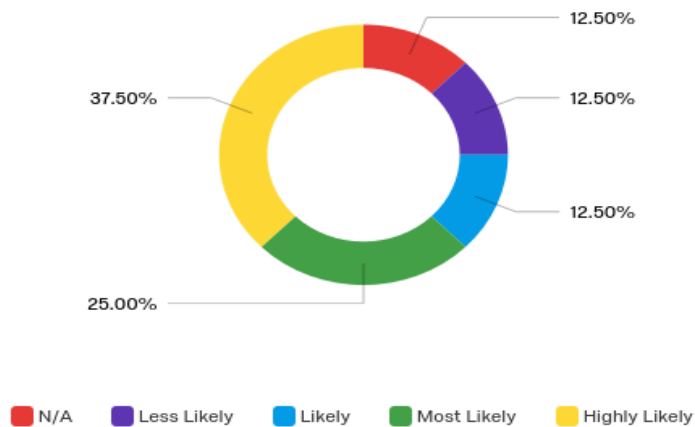
Q 36. Brexit is intensifying our need to innovate.



#	Answer	%
1	N/A	12.50%
2	Less Likely	37.50%
3	Likely	0.00%
4	Most Likely	25.00%
5	Highly Likely	25.00%
	Total	100%

Finding: 50% of respondents feel pressure from Brexit to innovate.

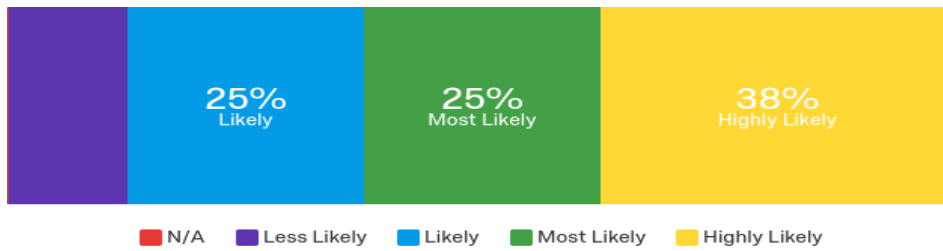
Q 37. Our ability to innovate is critical to our survival and growth under Brexit.



#	Answer	%
1	N/A	12.50%
2	Less Likely	12.50%
3	Likely	12.50%
4	Most Likely	25.00%
5	Highly Likely	37.50%
	Total	100%

Finding: 75% of the respondents stated that their survival under Brexit is dependent on their ability to innovate.

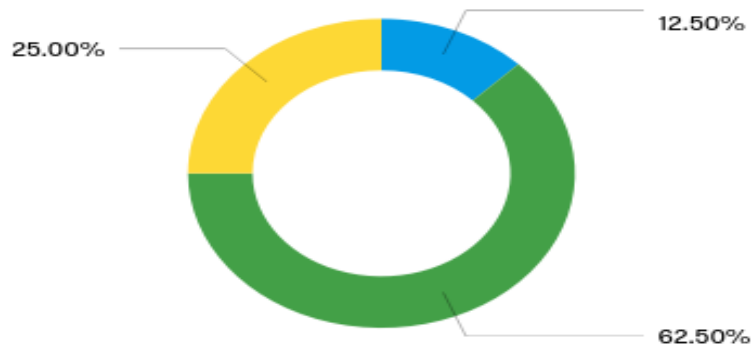
Q 38. Our ability to innovate drives our profitability.



#	Answer	%
1	N/A	0.00%
2	Less Likely	12.50%
3	Likely	25.00%
4	Most Likely	25.00%
5	Highly Likely	37.50%
	Total	100%

Finding: Significantly, a high percentage of respondents (63%) stated that their ability to innovate drives their profitability.

Q 39. Our business model drives our investments in innovation.



#	Answer	%
1	N/A	0.00%
2	Less Likely	0.00%
3	Likely	12.50%
4	Most Likely	62.50%
5	Highly Likely	25.00%
	Total	100%

Finding: Similar to the previous finding, 87.5% of respondents stated that their business model serves as the basic driver of their investments in innovation.

Conclusion on Innovation

The threat that Brexit negotiations present to Scottish Firms is affecting these firms to reevaluate the way in which they will conduct future business. Success under Brexit can be measured by a firm's ability to maintain their current profitability, as over 85% of respondents believe that their ability to innovate is what currently drives their profitability. Since research and development is so significant in the United Kingdom, the results of the economic negotiations process (Soft or Hard Brexit) will drive innovation, competitiveness and profitability. If the UK negotiates to stay inside of the European Economic Area (EEA) or joins the European Free Trade Association (EFTA), then we could see more stability in firms' profitability as these economic organizations provide structure and support to the firms within them.

With 50% of respondents feeling pressure to innovate from Brexit, the United Kingdom could become a large target for investors. Should the Pound falls as a result of Brexit, UK companies could become more attractive by providing potential investors with an opportunity to invest in innovating technologies – intellectual property. An increase in innovation can also encourage opportunities for mergers and acquisitions which could significantly change the landscape of UK firms. With companies such as Japanese companies threatening to leave the UK, R & D advances alone may not be sufficient to keep those Japanese companies from leaving. With so much emphasis and importance on innovation by UK firms in their models for sustainability, Brexit negotiations pose a serious threat. Even the smallest acts put into place by Brexit in the categories of immigration, economics, and education can disrupt a firm's ability to innovate and the quality of their innovation as it relates to global competitiveness.

Section 8 – Global Reach – Rebecca MacEachin

Q 40. Half of respondents said they are exploring new trade opportunities with countries outside the EU.

Q 41. Only 25% of respondents said they are exploring new trade opportunities with NAFTA companies.

Q 42. 62.5% of respondents stated Brexit would likely bring them to seek and invest in new markets.

Q 43. Over 75% of respondents stated they continuously assess domestic and international market opportunities.

Q 44. 62.5% of respondents said international competition has forced us to adjust our business model.

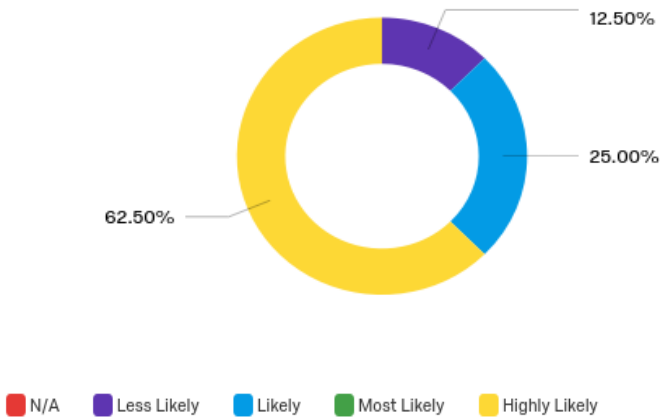
- Q 45.** Only 25% of respondents stated international competition has negatively affected their revenues.
- Q 46.** 62.5% of respondents stated international growth is definitely important to them, while 25% said it is somewhat important.
- Q 47.** 75% of respondents stated Brexit is **not** challenging their growth in international business.
- Q 48.** 87.5% of respondents stated their business model capabilities are more than likely able to support entering and/or expanding into other markets.
- Q 49.** 37.5% of respondents said they are actively seeking new trade partners.
- Q 50.** 87.5% of respondents stated they are developing global strategies.

Conclusion on Global Reach

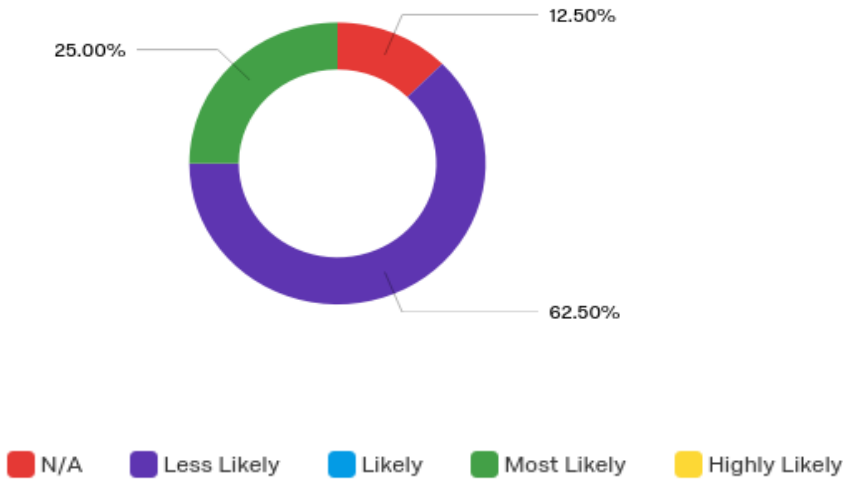
From the findings related to global operations, global business is very important to Scottish companies - i.e. over 60% of the respondents were positive on the importance of international business and growth. Over 80% of the respondents indicated their business model could support entering new markets and are currently developing global strategies. Survey answers and research indicate that Scottish companies have had significant trading experience with companies and countries of the EU over many years. This free movement of goods and people allowed Scotland to easily do business with EU countries. With the introduction of Brexit, there is a question of how doing business with these countries will change and whether or not it would benefit companies based in Scotland to look outside the EU for trade partners. The survey results suggest that Scottish companies are willing to look outside the EU for trade opportunities; more than half of the respondents stated they are exploring new trade opportunities outside of the EU, and 25% would consider looking to North American companies - NAFTA. This leads to the conclusion that Scottish companies believe Brexit decisions may still allow for reasonable trade agreements with EU partners and for new business relationships with the North American market.

Two conclusions from this survey are that Scottish companies have positive feelings towards international trade and growth and that Brexit is not inhibiting them from doing business. The survey supports the conclusion that Brexit is not inhibiting them from doing business because when companies were asked if Brexit is challenging their growth in international business, only 25% said yes. Instead it seems like Brexit will encourage Scottish companies to expand internationally as 62.5% of respondents stated Brexit would likely bring them to seek and invest in new markets. This clearly confirms that international business is something Scottish companies support and welcome.

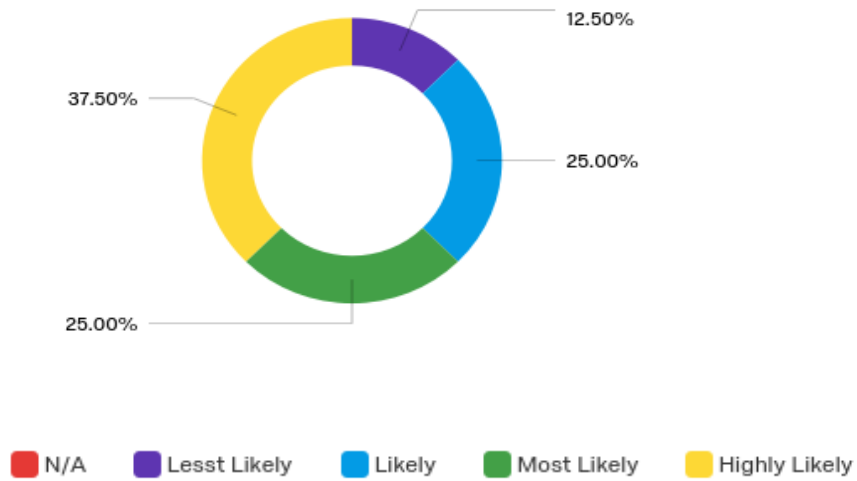
Q 46 - International growth is important to us.



Q 47 - Brexit is challenging our growth in international business.

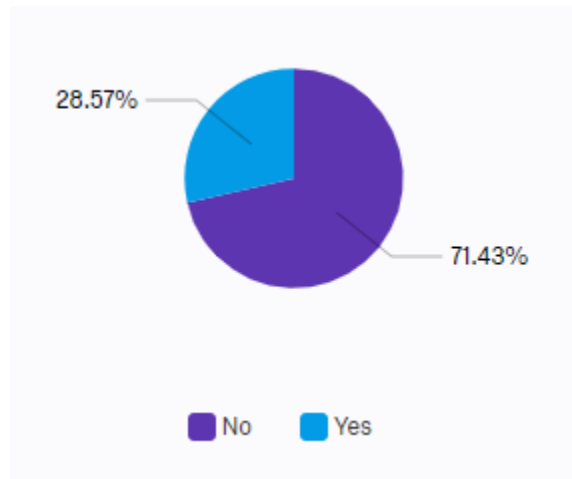


Q 48 - Our business model capabilities support entering and/or expanding into other markets.



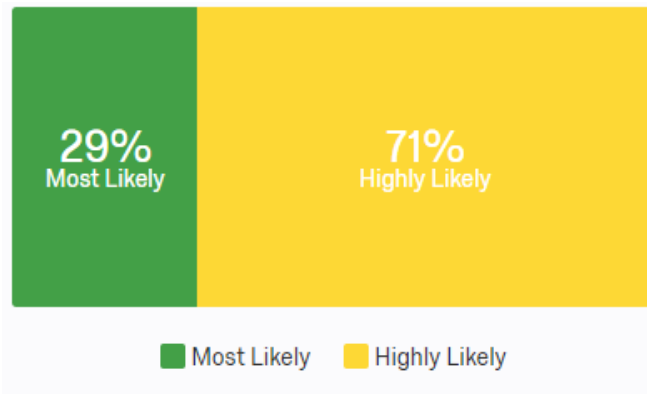
Section 9 – Business Model Drivers – Connor Williams

Q 51. Our business model has changed from the original concept.



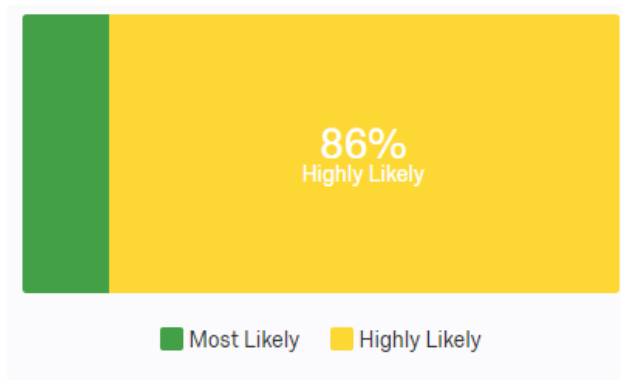
Finding: 71% of the respondents have not adjusted their business models likely due to uncertainty about reforms and changes and how they will affect their companies.

Q 52. We can adapt our systems and processes to respond to customer needs.



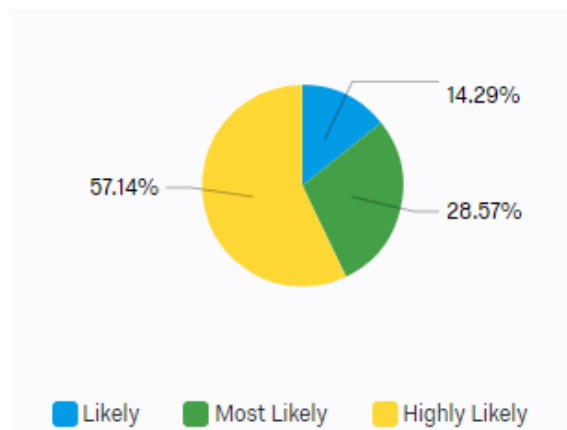
Finding: Over 70% of respondents expressed confidence they can proactively adapt to the impending changes Brexit will have on their companies (sourcing materials from other countries, potential tariffs, regulations).

Q 53. We use financial and operational metrics to measure our performance.



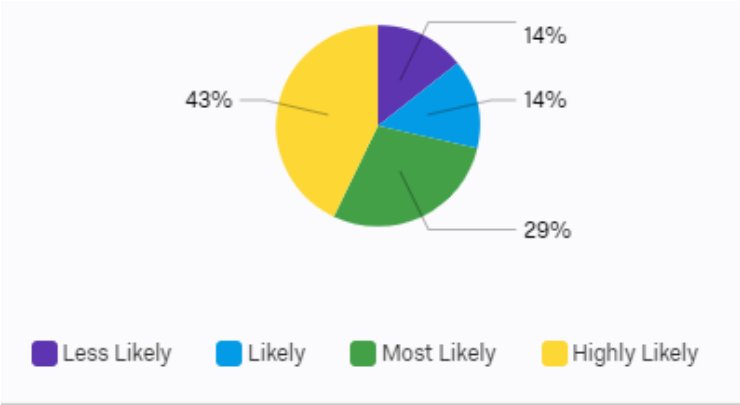
Finding: The results establish that Scottish companies use their business model metrics consistently to measure their performance.

Q 54. Our cost driver metrics and revenue driver metrics help us adjust our business model.



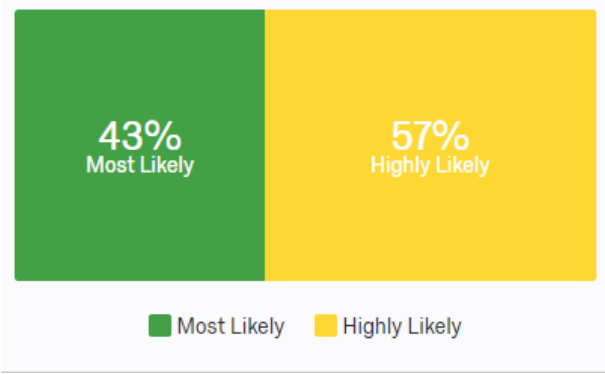
Finding: 86% of Scottish companies in the survey are highly likely to use financial and operational metrics to measure performance (Question #53); 57.14% are highly likely to use cost driver and revenue driver metrics to adjust their business models, while 28.57% are most likely. The results show that macroeconomic factors such as Brexit will play a part in the adjustment of these companies’ business models, once more is known about the implications it will have on these companies.

Q 55. We develop unique processes regularly to maintain competencies.



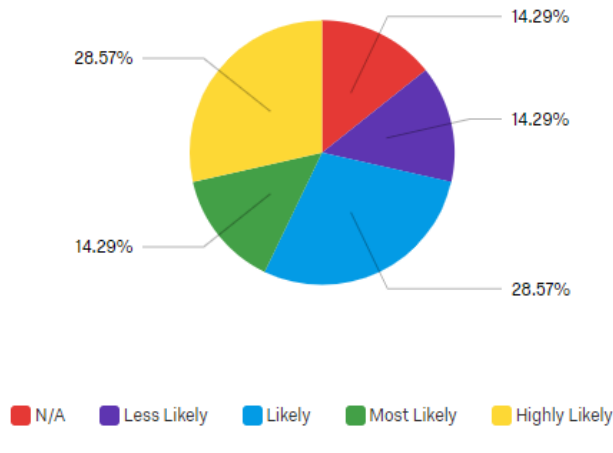
Finding: Over 70% of the Scottish companies surveyed are either highly likely or most likely to maintain competencies through innovation and creating unique processes to continue to distinguish themselves from competitors.

Q 56. We strengthen our competitive advantages through investing in our company’s key competencies.



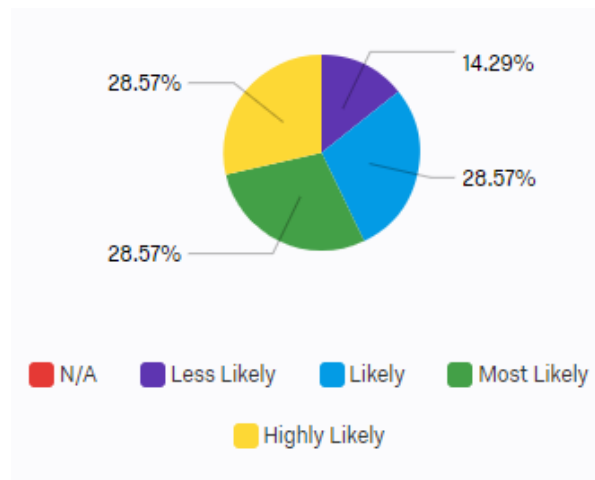
Finding: The results are clear: Scottish companies place a high emphasis on investing in core competencies in order to maintain a competitive advantage. As highlighted by the Q55 results above, this involves innovation and the creation of unique processes.

Q 57. We make acquisitions to improve our capabilities and competencies.



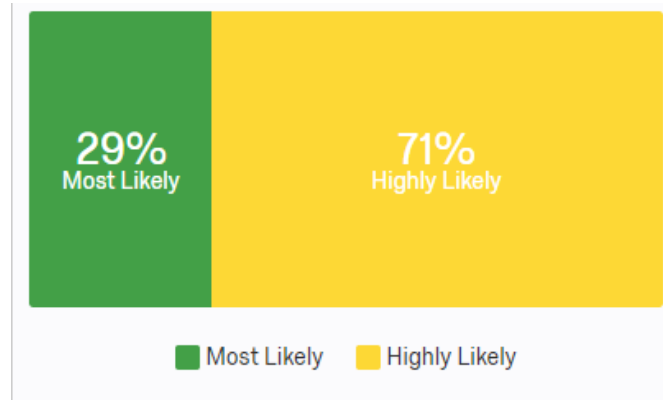
Finding: Over 70% of the companies in the survey are likely to make acquisitions to improve capabilities and competencies. This is relevant because companies understand how Brexit may lead them to potential acquisition targets that operate inside or outside of the UK to further develop capabilities needed to respond to the new Brexit competitiveness. The others are not as concerned.

Q 58. We are adding strategic alliance partners here and abroad to develop our strategic resources and capabilities.



Finding: Significantly, over 80% of the respondents are interested in pursuing strategic alliance partners here and abroad to develop strategic resources and capabilities. This interest in pursuing strategic alliance partners is to hedge against the risks that Brexit may present to Scottish companies, and to take advantage of new opportunities that Brexit may present as well.

Our competencies are closely aligned to our value proposition

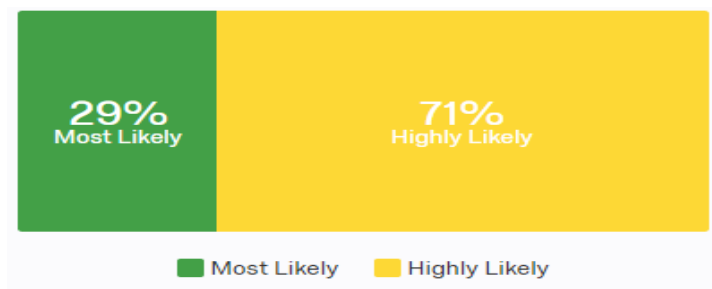


Finding: Competencies of these Scottish companies are highly correlated to their value propositions with over 70% confirming the correlation indicating high certainty among the participants.

Conclusion on Business Model Drivers

Research into Brexit and responses to the questions would indicate that a number of Scottish companies are less concerned about the impact of Brexit than anticipated and are planning for and taking proactive measures. There will undoubtedly be changes, but many Scottish companies are ready and will adapt as highlighted below.

We Can Adapt our Systems and Processes to Respond to Customer Needs



It is clear that Scottish companies are highly confident in their abilities to adapt to the upcoming changes Brexit will require of their companies. The results highlight that companies are confident to adapt their current business models. Our interviews with different firms based in Edinburgh confirmed this. The findings from the survey and from research present a clear conclusion: Scotland has accepted the fact that Brexit is going to happen, and they are getting ready for it. Once the details of new policies and negotiations come to light, companies will make changes to their business models if need be to maintain and enhance their competencies for competitiveness in a post-Brexit world.

6. Key Findings and Conclusions

- Company characteristics consisted of larger Scottish companies with turnover/sales between 10 million and 499 million pounds.
- A large majority of these companies felt that reviewing their business models was a high priority and most of these had sufficient resources to continue successful operations while improving capabilities.
- A high percentage are focused on better understanding the Brexit potential opportunities and taking proactive steps while seeking potential Mergers & Acquisitions for growth post-Brexit.
- A majority of the companies are planning to adjust their capabilities, seeking legal and HR advice and may decide to expand outside the UK.
- Companies are seeking input from their supply chain partners as Brexit approaches and are actively identifying back-up supply chain partners based on the uncertainties of trade and immigration issues.
- Larger companies expect labor shortages as the lack of workers with appropriate skills sets is a critical concern. Though labor costs are expected to rise due to potential labor shortages, layoffs are unlikely and should not impact job security. Interestingly, smaller Scottish companies are less concerned about labor shortages.
- Many companies do not expect to expand their R&D although a significant majority feel that their survival will be based on their continued capacity to innovate. A very high percentage feel that their innovation will drive their profitability.
- A significant majority feel that their international growth is important to their business expansion and are developing global strategies. They will explore investing in new markets and utilizing their business model capabilities to support such expansion.

The findings and conclusions in this report provide evidence to support the research proposition that Scottish firms are using their business model's dynamic capabilities to adapt to Brexit challenges to enhance international growth and competitive advantages.

7. Appendices

A. Research Team - Providence College School of Business Graduate MBA Program

David Hansen:

BSc Accounting Major, University of Rhode Island, 2014.
MBA with Accounting Concentration, Providence College, 2019

Work Experience: Senior Accountant at PPA, LLP in Warwick, RI, USA

This project was interesting to me because we were in the midst of history in the UK with the uncertainty of Brexit less than one year away.

William Kalinowski:

BA. Providence College. Major: Quantitative Economics, May 2011
Minor: Applied Physics & Mathematics
M.B.A. Providence College. Concentration in Finance, May 2019

Work experience: VIRTUSTREAM – Senior Advisor, FP&A. BOSTON FINANCIAL INVESTMENT MANAGEMENT (BFIM) – Equity Production Investment Analyst.
RAYTHEON COMPANY (RTN). Financial Analyst II.

This project was interesting to me because it connected classroom learning with the real world while expanding my global mindset.

Peter Kokias:

BSc in Finance and Management, expected graduation 2020.
Note: Peter was the only undergraduate student who qualified to take a graduate level course. His work was exceptional.

Rebecca MacEachin:

Bachelors of Science in Accountancy, minor in Finance. Providence College. 2017.
Masters of Business Administration (MBA) concentration in International Business. Providence College. 2018
As a recent graduate, I will be starting my career in public accounting at Ernst and Young beginning Fall of 2018.

This project expanded my global mindset in particular what it means to conduct business internationally and in doing so, it solidified my interest in international business.

Roy Marshall:

Bachelors of Science, Rhode Island College, 2013, Marketing
MBA, Providence College, 2018, International Business & Marketing
Work experience: Marketing for Consumer Goods and Local Businesses, International Supply Chain Management, Brand Management, Product Management, Project Management

This project has given me the opportunity to analyze and understand how decisions made by the government affect the civilians of different countries as well as businesses around the world, both large and small. During our study of Brexit, we were able to view how each company and its leaders had to make a decision, based on the unknown, on whether to be reactive or proactive towards Brexit.

Kelsey Napolione:

Bachelor of Science in Computer Science. Stonehill College. 2014.
Pursing MBA at Providence College with a concentration in Management, expected graduation in May 2019.

Work experience: Worked in the technology industry for the past 4 years on various software development projects.

This project was interesting to me because it allowed me to go beyond a cultural experience and truly understand the business challenges and opportunities of other countries as a result of Brexit. It expanded my global mindset in a different way than other projects had. The combination of research and experiencing it firsthand added immense value to the project as well.

Brendan Smith-Wilks:

Undergraduate - Assumption College, Accounting Degree, 2014
Graduate - Providence College, MBA, Finance Concentration, 2018

Work experience: CVS Health, Foreign and Domestic Treasury Analyst.
I am responsible for managing and updating treasury information in various programs and company databases. I manage CVS Health business entities and operations in foreign countries. I also prepare high-quality presentations and reports for executive leaders of the company. I am responsible for managing domestic and international cash positions, forecasts, and initiating wire and ACH payments.

This project was interesting to me as I got to experience how businesses and universities handle and manage changes on a global scale.

Connor Williams:

Bachelors of Science in Finance, Providence College (2017)

MBA, Providence College (2018)

This project provided me with a much greater understanding of the complex topic of Brexit, and it was interesting to learn about the various short term and long term implications on domestic economies and the global economy.

Dr Francine Newth:

Professor of Global Management in the School of Business at Providence College, Providence, Rhode Island, USA, Dean's Office Global Fellow. She is a recent recipient of an upcoming Fulbright Specialist award. She has over 25 years of teaching experience. She holds a doctorate in business administration with a concentration in international management from the H. Wayne Huizenga School of Business and Entrepreneurship at Nova Southeastern University. She teaches the undergraduate and graduate capstone courses in *Strategic Management*, *International Business*, *Global Management* and the *Real-World Internship Experience* course at Providence College where she invites executives to submit problem-solving projects for her courses for which she has developed her Global Project Learning (GPL) platform for industry and academe collaboration. Her many leadership roles have included Acting Dean of the School of Business, Director of the Division of Business Administration, Director of the MBA Program, and Chair of the Department of Management.

Dr Newth's research focuses on business models, corporate strategy and global management. Her publications include a book entitled "Business Models and Strategic Management: a New Integration" available in seven modules at Harvard Business School (www.hbsp.harvard.edu), at Amazon and other sites; and numerous articles on dynamic capabilities, business models, and transfer of knowledge in the *International Journal of Strategic Management*, the *Journal on Management*, the *Journal of Global Business Perspectives*, and *Harvard Business School Publishing*.

She has received several grants to conduct research with international firms such as Unilever, Mercedes-Benz, and Volkswagen in Australia, China, Germany, Singapore, Switzerland, and the United Kingdom. Dr Newth has received the **Innovation in Teaching Faculty Award** from the Providence College School of Business and the **Business Partnership Faculty Award** for creating partnerships and alliances with the business community including an innovative Global Learning Partnership with DSI (subsidiary of Bowater/Rexam, UK).

She was chosen by Prince Alwaleed of Saudi Arabia, one of the world wealthiest and most successful businessmen, to teach his wife Ameerah, daughter-in-law Moneerah and other princesses on the basics of managing a business.

She has been a professional business consultant to US businesses on the importance of reviewing their business models and selecting strategies to fit their business models.

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C. Business Model Review Guide (Quarterly Assessment)

Key Questions	Business Model <i>Use the business model elements below to answer the questions from the first column.</i> <u>In less than 10 words describe:</u>	Assessment 1 to 10 <hr/> Adjustment Needed Unlikely(U) Likely (L) Highly Likely (H)	
1. Is our Value Proposition relevant?	Our Value Proposition:	1 to 10	U L H
2. Do we need deeper capabilities to deliver our value proposition and sustain our profitability?	Our Strategic Resources: <i>(what resources and unique capabilities support our key processes)</i> Our Dynamic Capabilities: Our Key Processes:		
3. Are our metrics helpful in adjusting our Business Model?	Our Operational Metrics: Our Financial metrics:		
4. Have we acted on the outcomes of our strategic reviews? (Executorial investments?)	Our Strategic Reviews:		
5. Have our innovations resulted in greater margins, new revenue streams, lower costs, enhanced productivity, etc...(How is our organization's ability to innovate?)	Our Capacity to Innovate/Change:		

D. Brexit Business Model Survey link:

http://providence.az1.qualtrics.com/jfe/form/SV_5bZ6Q0QlAZ1kPHv

QC code (PC or Mobile access to survey)



Thank you

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