

Configuration Manual

MSc Research Project Financial Technology

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MSc Project Submission Sheet

School of Computing

Student Name:	Angel Chidera Nnamd
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Student ID: X23144327

Programme: MSc in Fintech **Year:** 2023/2024.

Module: Research Project

Lecturer:

Noel Cosgrave

Submission Due

Date:

12th August 2024

Project Title: Investigating the Impact of Fintech on SMEs in Dublin

Word Count: 17 Page Count: 4515

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Signature: angel \mathfrak{N}

Date: 11th August 2023

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Configuration Manual

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1 Introduction

The configuration manual explains all the procedures and requirements for the reproducibility of the analysis performed in the study to ensure the validity of this research project, 'The Impact of Fintech on SMEs in Dublin'.

2 Configuration

Processor: 13th Gen Intel(R) Core (TM) i5-1335U 1.30 GHz

Installed RAM: 8.00 GB

Device ID: F4C93447-B75C-4B57-9481-CE0673C411D4

Product ID: 00342-21004-35881-AAOEM

System type 64-bit operating system, x64-based processor

Edition: Windows 11

3 Research Project

The qualitative data was gathered using interview from different participants gotten from SMEs across Dublin. Interview was conducted virtually across Google Meet with each interview being an average of 10 minutes. The analysis of the qualitative data would be done using thematic methodology with each research objective providing a theme for the analysis.

Theme 1: Efficacy of fintech solutions in addressing traditional financial challenges

The interview showed that most SMEs consider Fintech solutions to be a major tool in addressing traditional financial challenges they face like payroll, payment to vendors, reducing financial fraud and collecting payment from customers. Participants were asked if the adoption of fintech solutions has impacted their SME's access to finance and if they have noticed any changes in financial risk management within their SME since adopting fintech solutions. One of the participants talked about how SMEs has helped reduce the issue of payment processing as they have implemented Checkout.com on their services. According to him.

"Since we implemented Checkout.com in our store, it has significantly made our payment processing easier. Before, we used to face a lot of delay and inefficiencies, which most times led to customers complaining but now, since integrating Checkout's API, we have seen a major improvement in transaction speed and even our customers

have confirmed this. This change has really made us more efficient in our operations and also increased customer trust."

Another participant talked about raising finance through a fintech service as it offered them the chance to get the necessary finance with less stress and wait time compared to traditional banks that usually took longer time and asked for collateral. According to the participant.

"Using fintech to raise finance was a game-changer for us. One time we needed more cash for our business, we were profitable, but we had a cash crunch, and I remember getting on Revolut and in a few days we had more than enough cash for that period. The process was much faster and less stressful. Normal banks are always very stressful and the process to approve a loan request can become lengthy but with this fintech app, we bypassed these issues and had enough cash in a short time. That cash helped us get more products and considering it was closer to November, it helped us get enough product for black Friday deals we offered."

Other participant echoed similar sentiment, showing that adoption of fintech services has made financial task easier. Participants talked about the fact that they can now hire remote workers due to the ease with which they can pay them through different fintech solutions, with workers getting their payment in their home currency in a matter of hours. This sentiment was shared by one of the participants thus.

"Since after COVID, we have had two remote workers, and they have been a significant advantage to my business. With one of the fintech apps, we have been able to ensure they got paid on time and even though we paid in Euro, the app converted it for them at a good rate and paid them same day. Because of that, I have considered employing more remote talents because they offer something different, and I do not have to worry about if they get paid on time because of transaction issues."

Theme 2: Determinants of fintech adoption among SMEs in Dublin

Participants talked about the different reason for their decision to adopt fintech solutions, with most of them adopting it due to competition in their sector and the support environment they got from the SME. Most of the SMEs interviewed started using Fintech solutions due to the need to become competitive in their industry and as a means of ensuring they stay afloat. According to one of the participants.

"You know how the SME business can be competitive, we have had to implement a few fintech solutions so we can be competitive. Here, everyone is using the newest technology, or finding customers in the newest social media website and trying to make them pay with one click. We use a few fintech solutions and they have been helpful too, coming around to make sure we are setup well and even doing a quick training for people that works here."

Some participant talked about the adoption process and how difficult it was for their SME to adopt it in place of their legacy systems. Most of the participants had an easy adoption process due to the support offered by Fintech solutions as they were walked through the process of installing and running different fintech solutions on their system. One of the SMEs that plays in the retail industry discussed how the fintech startup sent personnel to help them setup their system and ensure it was working while also being available to help them whenever there was a downtime. According to the participant interviewed for the company.

"Transitioning from the system we had to a new online app was difficult at first because no one knew how to use it but overtime they sent someone to help us implement it because we couldn't wait"

Another SME adopted Fintech solution because it afforded them an easy way to doing their books so that they would not have any regulatory issues. Some fintech provided accounting services to SMEs and this covers things like balance sheet, invoicing, taxes and purchases. The SME utilizes these different services to ensure they do not conflict with regulatory bodies.

Theme 3: Economic impact of fintech on the Dublin SME sector

Participants were asked the economic impact of fintech adoption on their SME sector. Comparing their sector to other sectors, the sector that has adopted fintech solutions the most is the retail sector and other financial-related SMEs. This adoption has been due to increasing need to meet up with regulatory standards and to help with issues like inventory and payment. This sentiment was shared by one of the participants thus.

"I work in the retail sector, and we have had to use some of these fintech apps for almost everything now, from payment to inventory. It has been a game changer for us here and everyday new ones are springing up with better solutions than the last"

Every participant agreed that adoption of Fintech solutions has led to business growth with varying degrees. Some of the participants have adopted fintech solutions to help cover issues like payroll, payment processing or even business intelligence. One of the SME owners that has utilized Fintech solutions for business intelligence said;

"We started using a fintech app that helped streamline almost all our processes. We had a better idea how our data functions and where best to add more marketing funds to. It even provided us with charts and all those, and we saw how our business was doing in real time".

Another participant considered fintech solutions to be the major reason his business has seen growth financially as it has helped him cut off cost and optimized his business spending. According to the SME owner below.

"Since we started using an app I would not mention here, we have had major financial growth. We knew where best to cut cost and where to add more money and our profit has sincerely been out of the roof."

When asked if they have any need or requirements in their sector that influenced fintech adoption, the most pressing need was the need to be competitive and stay afloat. According to one of the participants, SMEs in Dublin are not as innovation averse like before as they have seen that these technological solutions can be a decider in their profitability. Other participants talked about the need to simplify their business process, to ensure regulatory compliance and increased profitability among others.

4.3 Demographic profile of participants in main study

Table 1: Descriptive Statistics

Descriptive Statistics	Options	Number of respondents	Percentage
What is your gender?	Male	119	59.5%
	Female	81	40.5%
	Prefer not to say	0	0%
Age	Mean Age distribution	40 years	
	Age range	15-55	
Age Distribution	Under 25 years	25	12.5%
	25-34 years	98	49%
	35-44 Years	31	15.5%
	45-54 Years	33	16.5%
	55 or older	13	6.5%
Level of Education	High School	44	22%
	College	32	16%
	Associate degree	24	12%
	Bachelor's Degree	91	45/5%
	Master's Degree	9	4.5%
	Doctorate	0	0
What is the primary industry of your SME?	Retail	68	34%

Manufacturing	42	21%
Services	33	16.5%
Technology	33	16.5%
Others	24	12%

Table 2: Efficacy of Fintech Solutions in Addressing Financial Challenges

	Mean	Std. Deviation
Fintech has improved my SME's access to finance.	3.702	0.790
Digital payment solutions have enhanced our payment processing efficiency.	4.140	0.524
Fintech solutions have reduced our overall financial risks.	3.882	0.645
The use of fintech solutions has made financial management easier for our SME.	4.210	0.771
Fintech solutions has provided us with better tools for risk management.	3.732	0.746
Overall, fintech has addressed traditional financial challenges faced by our SME.	4.011	0.821
Aggregate	3.946	0.716

Table 3: Determinants of Fintech Adoption

	Mean	Std. Deviation
Our SME perceives significant benefits from adopting fintech.	4.0358	0.643

Aggregate	3.838	0.734
Our SME is motivated to adopt fintech to stay competitive.	3.984	0.623
The support environment (e.g., industry associations, government programs) has facilitated fintech adoption.	3.991	0.784
We have sufficient knowledge and resources to implement fintech solutions	3.768	0.934
The regulatory environment supports our adoption of fintech solutions.	3.833	0.426
There are minimal barriers to adopting fintech solutions in our SME.	3.416	0.992

The data provided shows the determinants of Fintech Adoption among SMEs in Dublin. The analysis focuses on six key statements, and each would be evaluated for mean scores and standard deviations to understand the overall sentiment and the level of agreement among respondents. The first statement, "Our SME perceives significant benefits from adopting fintech," received a mean score of 4.0358 with a standard deviation of 0.643. This high mean score indicates a strong positive perception of the benefits derived from fintech adoption. The moderate standard deviation shows there is a reasonable level of agreement among respondents, although there is some variation in individual experiences. The second statement, "There are minimal barriers to adopting fintech solutions in our SME," scored a mean of 3.416 and a standard deviation of 0.992. The lower mean score suggests that while some SMEs consider there is a minimal barrier to fintech adoption, others face major challenges in adoption of SMEs. The high standard deviation shows that there is a considerable variability in responses, indicating that experiences with barriers to adoption are quite diverse among SMEs. Concerning regulatory support, the statement "The regulatory environment supports our adoption of fintech solutions" has a mean of 3.833 and a standard deviation of 0.426. The relatively high mean score suggests that there is a generally positive perception of the regulatory environment and how its support for fintech adoption. The low standard deviation shows strong consensus among respondents, suggesting that the regulatory support is consistently perceived across different SMEs.

The statement "We have sufficient knowledge and resources to implement fintech solutions" received a mean of 3.768 and a standard deviation of 0.934. The mean score shows that there is a moderately positive perception of the availability of knowledge and resources necessary for fintech implementation. However, the standard deviation is high compared to other statements and this suggests a wide range of experiences among SMEs, with some feeling well equipped and others not so. For the statement "The support environment (e.g., industry associations, government programs) has facilitated fintech adoption," the mean score is 3.991 with a standard deviation of 0.784. This high mean score shows that many SMEs find the

support environment conducive to fintech adoption. The standard deviation, while not as high as others, suggests that there are some variabilities in how different SMEs perceive the support from industry associations and government programs. Lastly, the statement "Our SME is motivated to adopt fintech to stay competitive" has a mean of 3.984 and a standard deviation of 0.623. The high mean score shows that there is a strong motivation among SMEs to adopt fintech solutions to maintain competitiveness. The relatively low standard deviation shows that there is a high level of agreement among respondents, which suggest that the motivation to adopt fintech is widely shared.

In aggregate, the data shows that there is an overall positive sentiment towards fintech adoption among SMEs, with an aggregate mean of 3.838 and an aggregate standard deviation of 0.734. This indicates that, on average, SMEs perceive fintech solutions to be favorable, and they recognize the significant benefits and support they get from the regulatory and support environments. However, there are barriers in the availability of knowledge and resources, which is shown in the diverse experiences of different SMEs.

Table 4: Economic Impact of Fintech on SMEs

	Mean	Std. Deviation
Fintech has contributed to the growth of our business.	4.044	0.515
The use of fintech solutions has led to job creation within our SME.	3.880	0.939
Fintech solutions have enhanced our competitiveness in the market.	4.180	0.562
Our overall financial performance has improved due to fintech adoption.	4.012	0.732
Fintech solutions has enabled us to better respond to market changes.	3.881	0.837
The economic impact of fintech on our SME has been positive.	3.922	0.511
Aggregate	3.987	0.683

This section discusses the economic Impact of Fintech on SMEs. The analysis focuses on six key statements, and each would be evaluated for mean scores and standard deviations to understand the overall sentiment and the level of agreement among respondents. The statement "Fintech has contributed to the growth of our business" had a mean score of 4.044 with a standard deviation of 0.515. This high mean score shows that there is a strong positive

sentiment towards the role of fintech in business growth, indicating that many SMEs perceive that there are significant benefits. The relatively low standard deviation suggests a high level of agreement among respondents, meaning that this positive impact is a common experience across different SMEs. For the statement "The use of fintech solutions has led to job creation within our SME," the mean score is 3.880 with a standard deviation of 0.939. While the mean score shows that there is a positive perception of job creation due to fintech, the standard deviation is high, and this reflects considerable variability in responses. This suggests that while some SMEs have experienced job growth, others may not have seen the same level of impact, and this shows the diverse effects of fintech on employment within SMEs. The statement "Fintech solutions have enhanced our competitiveness in the market" has a high mean score of 4.180 and a standard deviation of 0.562. The very high mean score shows there is a strong consensus that fintech solutions significantly enhances market competitiveness. The low standard deviation supports this assertion, showing that this perception is widely shared among SMEs, suggesting fintech plays a substantial role in maintaining competitive advantage.

Regarding financial performance, the statement "Our overall financial performance has improved due to fintech adoption" received a mean score of 4.012 with a standard deviation of 0.732. The mean score is also high, and it reflects a positive sentiment towards the improvement in financial performance caused by adopting fintech solutions. However, there is a moderate standard deviation, indicating some variability in experiences, with most SMEs seeing financial benefits but with varying degrees of impact. For the statement "Fintech solutions have enabled us to better respond to market changes," the mean score is 3.881 and the standard deviation is 0.837. This suggests a generally positive view of the role of fintech in enhancing responsiveness to market changes. The relatively higher standard deviation shows that this experience in diverse, with some SMEs feeling more equipped to adapt to market changes than others, reflecting the different impact of fintech solutions. Finally, the statement "The economic impact of fintech on our SME has been positive" has a mean score of 3.922 and a standard deviation of 0.511. The high mean score shows that there is a positive perception of the economic impact of fintech, while the low standard deviation shows that this opinion is strongly accepted among respondents. This suggests a widespread recognition of the economic benefits brought by fintech solutions across different SMEs.

In aggregate, the data shows that there is a predominantly positive sentiment towards the economic impact of fintech solutions on SMEs, with an aggregate mean of 3.987 and an aggregate standard deviation of 0.683. This shows that that, on average, respondents have a favorable view of the contribution of fintech solutions across various aspects of business operations and performance. The relatively moderate standard deviation suggests a reasonable level of agreement among respondents, though there is some variability in individual experiences. Specific patterns in fintech adoption would be shown in the Configuration manual.

Table 5: Specific Patterns in Fintech Adoption

	Mean	Std. Deviation
Fintech adoption varies significantly across different sectors in Dublin.	4.008	0.912

Aggregate	3.882	0.779
Our sector has unique support mechanisms for fintech adoption.	3.881	0.671
The regulatory environment impacts fintech adoption differently across sectors.	4.105	0.991
The benefits of fintech adoption are more pronounced in our sector	3.715	0.668
Our sector has specific fintech needs compared to other sectors.	3.703	0.651

This table shows the insights into the specific pattern of fintech adoption among SMEs in Dublin. Each statement is analyzed through the mean scores and standard deviations to understand the general sentiment and the level of agreement among respondents. The statement "Fintech adoption varies significantly across different sectors in Dublin" had a mean score of 4.008 with a standard deviation of 0.912. This high mean score shows that there is a strong perception that fintech adoption is not uniform across sectors. The relatively high standard deviation reflects considerable variability in responses, suggesting that experiences and observations regarding fintech adoption are quite different among the respondents, and this emphasizes the heterogeneity of sectoral adoption rates. For the statement "Our sector has specific fintech needs compared to other sectors," the mean score is 3.703 with a standard deviation of 0.651. The mean score shows that respondents recognize sector-specific fintech needs, though the sentiment is moderately positive. The standard deviation that is moderate indicates that there are some variabilities in responses, showing that while many sectors have distinct fintech requirements, the extent and nature of these needs can differ widely.

The statement "The benefits of fintech adoption are more pronounced in our sector" has a mean score of 3.715 and a standard deviation of 0.668. The moderately positive mean score shows that respondents consider the benefit of adopting fintech solutions in their sector to be significant. However, the moderate standard deviation shows that there are some variabilities in perceived benefits, highlighting that the extent to which fintech advantages are realized can vary across different sectors. Regarding regulatory influence, the statement "The regulatory environment impacts fintech adoption differently across sectors" received a mean score of 4.105 with a standard deviation of 0.991. This high mean score indicates a strong belief that regulatory factors play an important role in determining fintech adoption across various sectors. The high standard deviation reflects significant variability in responses, and this suggest that regulatory impacts are perceived quite differently among respondents, possibly due to sector-specific regulatory challenges and opportunities. The statement "Our sector has unique support mechanisms for fintech adoption" has a mean score of 3.881 and a standard deviation of 0.671. The relatively high mean score indicates a positive sentiment towards the availability of sector-specific support mechanisms for fintech adoption. The moderate standard deviation shows that

there are some variabilities in responses, meaning that while many sectors have tailored support systems, the effectiveness and presence of these mechanisms can differ.

In aggregate, the data reveals an overall positive sentiment towards the impact of fintech adoption across different sectors, with an aggregate mean of 3.882 and an aggregate standard deviation of 0.779. This shows that, on average, respondents recognize the significant role of fintech and the distinct sectoral influences that shape its adoption. The moderate standard deviation suggests a reasonable level of agreement among respondents, though there is notable variability in individual experiences and perceptions.

3.1 Research Questionnaire

Dear respondent,

This research investigates the impact of fintech on small and medium-sized enterprises (SMEs) in Dublin, with a focus on financial challenges, adoption determinants, economic effects, and sector-specific patterns. Collecting data through this survey would help serve as an important point in understanding the benefits and barriers SMEs face when integrating fintech solutions. Participation is voluntary, and all responses will be kept strictly anonymous to ensure privacy, encouraging honest and accurate feedback from respondents. Your contribution is invaluable, thank you for your time.

Sincerely,

Section 1: Demographic Information

1.	What is your gender? *
Male	

Prefer Not To Say Other:

2. What is your age? *

Under 25

Female

25-34

35-44

45-54	
55 or Older	
3.	What is the highest level of education you have completed? *
High school	
College	
Associate de	egree
Bachelor's d	legree
Master's De	gree
Doctorate O	ther:
4.	What is the primary industry of your SME? *
Retail	
Manufacturi	ing

Section 2: Efficacy of Fintech Solutions in Addressing Financial Challenges

Services

Technology Other:

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Fintech has improved my SME's access to finance.					
Digital payment solutions have enhanced our payment processing efficiency.					
Fintech solutions have reduced our overall financial risks.					
The use of fintech has made financial management easier for our SME.					

Fintech has provided us with better tools for risk management.			
Overall, fintech has addressed traditional financial challenges faced by our SME.			

Section 3: Determinants of Fintech Adoption

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Our SME perceives significant benefits from adopting fintech.					
There are minimal barriers to adopting fintech in our SME.					
The regulatory environment supports our adoption of fintech.					
We have sufficient knowledge and resources to implement fintech solutions.					
The support environment (e.g., industry associations, government programs) facilitates fintech adoption.					
Our SME is motivated to adopt fintech to stay competitive.					

Section 4: Economic Impact of Fintech on SMEs

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Fintech has contributed to the growth of our business.					
The use of fintech has led to job creation within our SME.					

Fintech solutions have enhanced our competitiveness in the market.			
Our overall financial performance has improved due to fintech adoption.			
Fintech has enabled us to better respond to market changes.			
The economic impact of fintech on our SME has been positive.			

Section 5: Sector-Specific Patterns in Fintech Adoption

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Fintech adoption varies significantly across different sectors in Dublin.					
Our sector has specific fintech needs compared to other sectors.					
The benefits of fintech adoption are more pronounced in our sector.					
Sector-specific challenges affect our adoption of fintech.					
The regulatory environment impacts fintech adoption differently across sectors.					
Our sector has unique support mechanisms for fintech adoption.					

3.2 Interview Questions

1. What industry does your SME cater to and how long have you been running the business?

- 2. Have you adopted any fintech solution in your SME?
- 3. How has the adoption of fintech solutions impacted your SME's access to finance?
- 4. Can you describe any changes in financial risk management within your SME since adopting fintech solutions?
- 5. What benefits do you perceive you've gotten from adopting fintech solutions in your SME?
- 6. What barriers have you encountered when trying to adopt fintech solutions?
- 7. How has fintech adoption contributed to the growth of your business?
- 8. In what ways has fintech influenced the overall financial performance of your SME?
- 9. How does fintech adoption in your sector compare to other sectors in Dublin?
- 10. Are there any specific needs or requirements in your sector that influence fintech adoption?

3.3 Consent Form

This consent form will have been given to you with the Participant Information Sheet. Please ensure that you have read and understood the information contained in the Participant Information Sheet and asked any questions before you sign this form. If you have any questions please contact a member of the research team, whose details are set out on the Participant Information Sheet.

If you are happy to take part in the questionnaire, please sign and date the form. You will be given a copy to keep for your records.

- I have read and understood the information in the Participant Information Sheet which I have been given to read before asked to sign this form.
- I have been given the opportunity to ask questions about the study.
- I have had my questions answered satisfactorily by the research team.
- I agree that anonymised quotes may be used in the final Report of this study.
- I understand that my participation is voluntary and that I am free to withdraw at any time until the data has been anonymised, without giving a reason.
- I agree to take part in the research

Name (Printed)	•••••
Signature	Date

References