

HEY SIRI, GOOGLE! CAN YOU HELP ME?

A QUALITATIVE CASE STUDY OF SMARTPHONES

AI FUNCTIONS IN SMEs



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Overview

- Research Background
- Research Methodology
- Findings and Analysis
- Discussion
- Conclusions
- Questions

Research Background

- ICTs are proliferating daily lives
- Recent ICTs of interest
- Artificial Intelligence
- Virtual Personal Assistants and Chatbots
- Smartphones: VPAs
- Daily life: AI can assist with daily functions
- VPAs will replace almost 69% of a manager's workload
- Hands free capability, real time translation, data analysis

SMEs and AI: Definition

- SMEs represent 90% of global business
- Provide 50% of total employment:
Global development
- UK: SMEs: <250 employees
- 0-9: Micro enterprises
- 10-49: Small enterprise
- 50-249: Medium sized
- This study: Micro-enterprises
- Limited human and monetary resources

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Research gap and Aim of this study

- Scopus: limited studies in this area
- Stakeholder theory and VPAs
- Aim
 - To explore, understand and explain smartphones AI enabled functions in the context of a case study
- Contributions: AI studies assisting a workforce of an organization are rare
- Studies of stakeholder theory, AI and SMEs are rare

Theoretical Background: SMEs and Digital Exclusion

- SMEs: Pandemic
- Online services
- Customers, suppliers, governments
- Lack of skills, resources
- Digital Exclusion
- Freeman et al “liability of smallness”
- Smaller the business, faces more internal and external events challenges
- Large organizations: Have tacit knowledge, specialised knowledge, financial resources, managerial capacity
- Digital Divide: “the gap between individuals, households, businesses and geographical areas at different socio-economic levels with regard to both their opportunities to access ICT and to their use of internet for a variety of activities” (OECD, 2001, p. 5).

Theoretical Background: Stakeholder Theory

- Used for over 30 years
- Definition: “A stakeholder in an organization is (by definition) any group or individual who can affect or is affected by the achievement of the organization's objectives” (Freeman, 1984, p. 46).
- Internal stakeholders
 - Within an organization
 - Formal members of an organization
 - Perform a task with organizational projects
- External members: Affected by company outcomes
- IS: Definition: “Individuals, groups, organizations, or institutions who can affect or be affected by an information system” (Pouloudi et al., 2016).
- Few studies: VPAs, SMEs and AI

Research Method

- Interpretivism: Examine perceptions and meanings of individuals in their contexts
- Inductive
- Qualitative
- Semi-structured interviews
- Stakeholders
 - Internal: Market sellers, managers
 - External: Customers
- April-August 2020: Lockdowns
- Online interviews: Zoom, Teams
- 60 to 90 minutes
- Sampling: Snowball, non-random, convenience, purposive
- 21 participants

Research Site

- Case Study
- Camden Market
- World famous
- Tourist attraction
- Iconic retail destination known for being London's first craft and antiques market, which maintains its reputation as Camden market for crafts (Camden Lock, 2020)
- One of the oldest markets of London
- Established: 1974
- 28 million visitors annually

How Camden Market was selected

Markets	Visitors per year	Date established	Stalls/Units	Location
Camden Market	28 million visitors (Camden lock,2020)	30th March 1974 (Camden lock,2020)	Over 1000 places to shop, eat, drink and dance (Camden lock,2020)	Camden town, London
Portobello Market	N/A	1940s (Portobello Road Market, 2020)	The world's largest antiques market with over 1000 dealers selling every kind of antique and collectibles (Portobello Road Market, 2020)	Portobello Road, London
Spitalfields Market	N/A	Regeneration programme ended in 2005 (Spitalfields, 2020)	Up to 110 stalls at its busiest day (Spitalfields, 2020)	Brushfield Street, Spitalfields, London

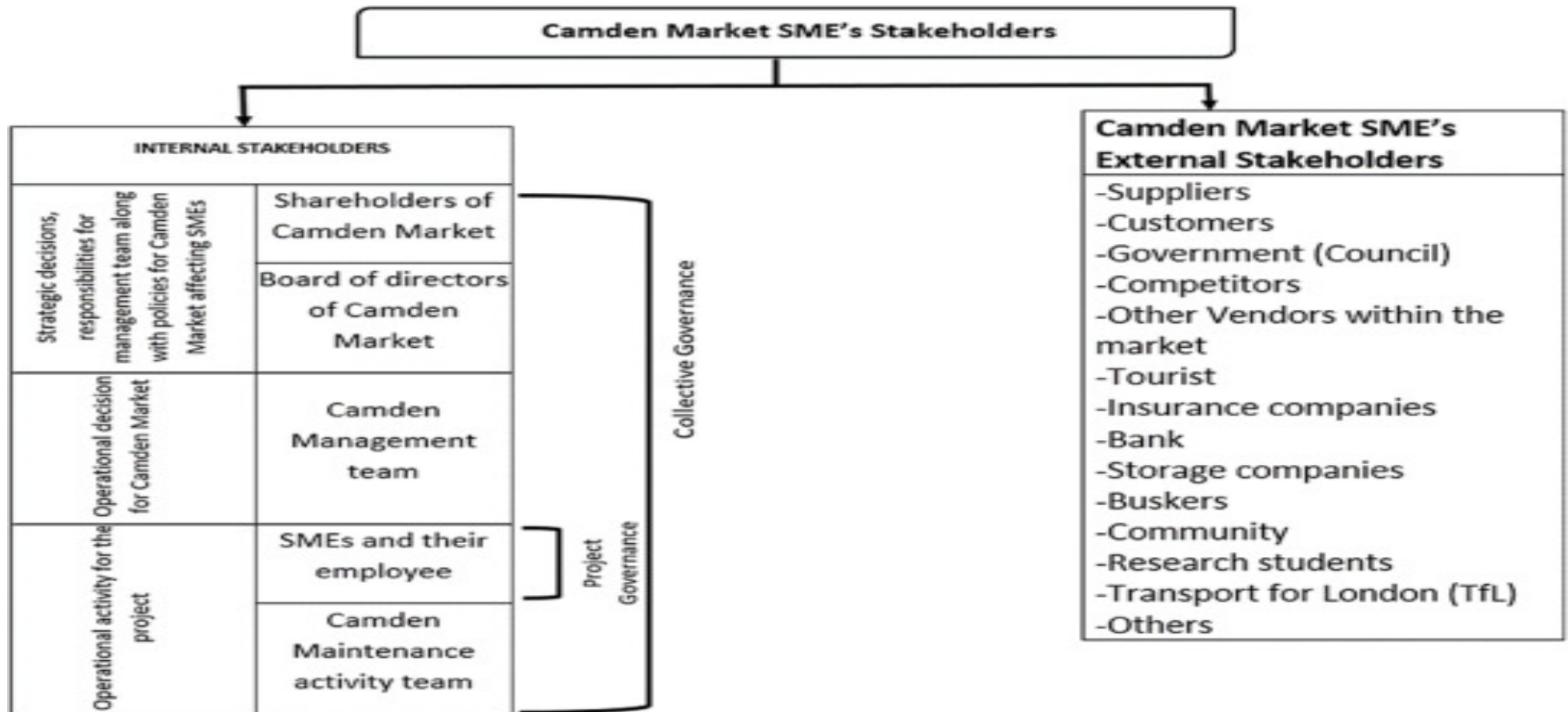
Data Analysis: Thematic analysis, Open coding

	First-order data	Key idea	Second-order concepts
Stakeholder Theory	<p><i>"I need to use the payment machine with an internet connection. For this, Camden is very good as there is a very good network coverage here. I am learning how to connect the machine to the internet and make my work go fast. However, due to the numbers of jobs that I have, for instance, for translation, searching, payments and such, the broadband here is not enough and I have to use my personal mobile data for that." (09FC)</i></p>	<p>The customer realised the importance of a good network coverage in Camden. Camden is famous for that.</p>	<p>Traders were attracted to Camden due to its good network coverage, which aligns with Van Dijk and Hacker's material access view.</p>

Findings: Stakeholders

- Rational level: Stakeholders are mapped and identified by their stakes
- Internal stakeholders: Managers and sellers/traders
- External stakeholders: Suppliers, customers
- Process level: Processes are structured in a way to reflect and align organizational; and stakeholder goals and expectations
- Transactional level: Equality when using the innovation

Transactional level: Internal and external stakeholders of Camden Market: Interacting with stakeholders



Findings: Digital Divide

- Value creation: Internet connections: Brochures are presented
- Sellers: Need a good broadband network:
- “I need to use the payment machine with an internet connection. For this, Camden is very good as there is a very good network coverage here. I am learning how to connect the machine to the internet and make my work go fast. However, due to the numbers of jobs that I have, for instance, for translation, searching, payments and such, the broadband here is not enough and I have to use my personal mobile data for that” (09FC).

Findings: Digital Divide: Technostress

- Technostress and VPAs
 - Customers: Could not understand the accents
 - “...I feel using the phone directly (typing) is more convenient than talking to Siri because sometimes it doesn't give me what I want. So yeah, I think because of the communication problem, I don't get the exact thing that I am expecting from Siri. So I prefer to use it directly... It sometimes miscommunicates what I'm saying when I command. So, that might be one of the reasons... Generally I prefer typing because you don't have to make any noise, you don't have to disturb anyone around you and no one can hear you. So it's more discreet and convenient, I guess, from my point of view.” (18FC).
 - Sellers: “Siri is mostly good at small sentences like, ‘how are you?’ or ‘how you doing?’ But when you talk about big sentences or a paragraph then of course, Siri gets confused and Siri is like: ‘Ok... I couldn't get it’, it means you have been wasting time verifying the solution and means a customer could go away” (10FC).

Findings: Digital Divide: Technoeustr ess

- Technoeustress and VPAs
 - Confidence grew when awareness and potentials became known
 - Tourist: VPA-management system: booking appointments: Extending the smartphone boundary to a booking system: Customer
 - From external: tourist to internal: customer
 - Manager: Booking system: “I have used VPAs in the past, as a reminder to book something in my calendar or anything I want to be reminded of, I just set it up and it does its jobs, it reminds me of my appointments so that I don't miss them....So, it does help to become productive and also reminds me to do things I that I really want to do. So, it is an integral part of my life.” (20FC). “I mean, I can plan my day and know what will happen for a couple of days... I mean, it gets you organised and then you can even manage your time, so time management, your productivity and things get more organised, done smoothly and you are more efficient.”(19FC).

Findings: Digital Divide: Technoeustr ess

- Technoeustress and VPAs
 - “(The VPA) helps me a lot because not every person speaks English. So, whenever I want to communicate with them, I use Google Translate. So, it makes it easier to communicate for both of us, you know, rather than not understanding each other (10 FC)”.
 - The real-time translation function of VPAs also assisted these sellers/traders in building a trusting relationship with customers. “Google assistant helps me a lot, by simply translating a language it's helping a lot because I have so many customers. From my experience, if I have a translator in Google, Apple or whatever, you know, they feel comfortable, they might recommend their friends as well: ‘...Okay, you know, there's a shop there, we support this product, you know, they use a translator... If you don't know English or any kind of languages, they can translate to you’... so there is a chance of other customers, coming towards me as well; potential customers, I would say, thinking that they can be comfortable buying any products from me... knowing that, you know, even though they can't speak English, we can communicate with each other. So, it makes them a little bit comfortable and it builds trust between us. So, there is a chance of them coming over and using our service again (10FC)”.

Discussion

- Digital inclusion: Free broadband
- Internet infrastructure: Faster payment methods
- Negative aspects: Difficulty processing natural language: due to accents and environmental sounds
- Technostress
- No privacy: Someone could be listening: When online banking: personal details
- Positive: Boundaries of devices were extended to personal organisers, language translators, weather forecasters
- Technoeustress
- Retailers had extended their roles. Similar findings to Wrzesniewski and Dutton (2001)

Discussion

- SMEs and ICT adoption: Time management: Challenge and hindrance
- Could not generalise: Managers are the ones lacking digital skills
- Contributions: Microenterprises, digital divide, stakeholders, urban

Conclusions

- Negative outcomes of VPAs
 - issues with processing natural language, lack of privacy, environmental disturbances and technostress.
 - Delays and reduced productivity
- Positive outcomes
 - Extension of processes and roles of individuals
 - Technoeustress
- Limitations: Small number of participants: No generalisations
- Conducted during the pandemic

Main reference

- Choudrie, J., Castro, C., Obuekwe, C.C, Manandhar, N. (2023). Hey Siri, Google! Can you help me? A qualitative case study of smartphones AI functions in SMEs. Available in: Technological Forecasting and Social Change.

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Online version



Questions

THANK YOU!

