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# Transforming Self-Perceived Self-Employability and Entrepreneurship among Mothers through Mobile Digital Sharing Economy Platforms: An Exploratory Case Study

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## Transforming Self-Perceived Self-Employability and Entrepreneurship among Mothers through Mobile Digital Sharing Economy Platforms: An Exploratory Case Study ABSTRACT

**Purpose.** This research focuses on the extent sharing economy transforms employability for women impacted by domestic and reproductive work. The authors explore the experience of mothers, of how digital peer-to-peer (P2P) platforms can affect their self-perceived employability and skills deterioration by unlocking human capital through technology acceptance.

**Methodology.** This study adopted a pragmatism-based approach incorporating using a single-case study research design with the Gioia methodology. It utilised a semi-structured telephone survey to collect data to explore the decisions around usage of a newly developed mobile P2P app, aiming to support employability among mothers. Analysis was conducted inductively using thematic analysis and partial least squares structural equation modelling (PLS-SEM). **Findings.** The study finds that methors experience high rates of continued labour merket.

**Findings.** The study finds that mothers experience high rates of continued labour market attachment on a casual or part-time basis, difficulty in juggling family and work, and high levels of concern both about future employment/entrepreneurial opportunities and expected stress in balancing dual roles of carer and earner. While mothers are interested in using new sharing economy technologies to reduce skills deterioration and improve signalling, the authors find that there were both technology and non-technology related barriers. These included trust and security, life-stage mismatch, time poverty and limitation of service offerings.

**Research Limitations.** This research was limited to mothers in one state in Australia and by the case study research design, the measurement model and the self-report nature of the data collection. Hence, the findings may lack generalisability in other contexts. It also limits the ability to make conclusions regarding causality.

**Originality.** This exploratory study contributes to research in the intersection between human resources (HR) and entrepreneurship by illustrating how sharing economy platforms can offer women a means to overcome the issues of signalling and skills deterioration in relation to aspects of human capital theory by developing new skills that may act as positive signals signal to potential employers or investors. Additionally, the social interactions between mothers, through technology adoption, can provide a basis for improving future self-employment or entrepreneurship and employability.

**Keywords:** Self-employment, self-perceived self-employability, entrepreneurship, sharing economy, P2P platforms, technology acceptance, signalling, skills deterioration.

## Transforming Self-Perceived Self-Employability and Entrepreneurship among Mothers through Mobile Digital Sharing Economy Platforms: An Exploratory Case Study INTRODUCTION

Dual-income households have become increasingly common in recent decades (Nel et al., 2010), with most mothers in some paid employment. However, caring responsibilities are still expected to fall primarily upon women, leading to the normalisation of a "male breadwinner/female carer" model (Chapman et al., 2014, p. 100). With care for children still firmly divided by gender, many mothers find themselves under time-related stress as they attempt to juggle the dual roles of earner and carer which has become the norm (Chapman et al., 2014). This has led to low full-time workforce participation of mothers, and over-representation in part-time and casual work in many countries.

This results in employability issues where many mothers are perceived by both themselves and by employers as being less employable. They may suffer from stigma relating to a non-linear career path (Hennekam and Bennett, 2016), and may be underemployed, underutilised and/or in precarious employment; if they have taken time out from the workforce, they may struggle to return to employment (Weisshaar, 2018) and may experience long-lasting negative career outcomes (Kleven et al., 2018).

Facing disadvantage in the traditional labour force, while still doing the lion's share of unpaid household and care work, has been interpreted as a strong motivation for mothers to take up self-employment, often in home-based businesses (Constant, 2009). The traditional model of self-employment generally assumes that ventures are started and continue to operate with an objective of profit maximisation, and that the main time-use of the self-employed contractor or business founder entrepreneur will be on activities i.e. she is expected to work long hours, with a devoted commitment to her enterprise that is held in higher priority than family and personal life (Douglas and Shepherd, 2002). The irony is that these entrepreneurs are expected to fit life around their business, rather than the case of entrepreneurial self-

employed mothers that combine running an entrepreneurial venture with family care responsibilities, often motivated to start their venture because of caring duties, and who often seek shorter and more flexible hours (Knörr, 2011).

The rise of the on-demand, sharing or gig economy (Bulchand-Gidumal and Melián-González, 2018) that is characterised by the sharing of resources typically through peer-to-peer (P2P) platforms that facilitate the exchange of unused goods and services (Barnes and Mattsson, 2017) has expanded the pool of people that are able to more easily gain entry into self-employment or entrepreneurship. Bergman and Jean (2016) observe that people that work in these collaborative environments, often via online labour platforms (which have been referred to as freelancers, gig workers, micro-entrepreneurs, independent professionals or self-employed individuals (Kuhn and Maleki, 2017, McKeown and Cochrane, 2017, Barlage et al., 2019), are under researched in the organisational and HRM literature. Hence, there is potential to unmask the invisibility and study this phenomenon (Kuhn, 2016).

Part of the attraction and potential for these sharing economy technologies among mothers is that they can potentially help overcome labour market failure and the time/space constraints associated with motherhood by improving signalling and reducing skills deterioration aspects of human capital theory. As such, the main research question for the study is to understand the contribution of mobile P2P platforms in facilitating employment for mothers, and challenges faced in accessing these technologies for the purpose of improved employment outcomes, with the intention of creating a better mobile P2P app which can allow more mothers to capitalise on the potential of the sharing economy to unlock their potential.

To help answer the research question, we seek to firstly explore why mothers would be encouraged or put off from using such P2P platforms to overcome self-perceived barriers to self-employment or entrepreneurship. Although such P2P platforms may be new, their success in helping mothers overcome their employability and entrepreneurial barriers will only helped

if they continue using the platform and whether they would encourage other individuals or organisations to use the platform. Secondly, to measure the success of the app and examine various factors which influences the app's success among women, in particular factors that would affect mothers from re-using the platform and whether they would recommend it to others.

We suggest that the use of sharing economy technology, which involves P2P platform facilitated activities (Hamari et al., 2016), may support mothers into self-employment or entrepreneurship and other employment activities by overcoming certain issues caused by signalling and skills deterioration aspects of human capital theory. In so doing, the study in particular, responds to the special issue's call for enhancing knowledge of how workers in the sharing economy contribute to a better understanding of how the sharing economy, in this case, P2P platforms, can enhance existing HRM practices with their technologies to improve employability and self-employment options for mothers.

#### RESEARCH CONTEXT/BACKGROUND

#### Maternal Employment, Self-Employment and Entrepreneurship in Australia

According to Fitzsimmons and Callan (2015), the lost opportunity posed by the unused human capital of Australian women is about \$300 billion per year. The labour market outcomes of Australian mothers are impaired by the fragile balance that comes with juggling work with family commitments in the context of a prevailing culture of intensive motherhood in which expertise and presentism are expected of mothers (Ekinsmyth, 2013). The decision to exit full-time employment upon becoming a mother due to discretionary choice or non-discretionary constraints is complex in a society which is still firmly divided by gender roles (Foley, 2016). In Australia, the typical mother of an infant spends 51 h per week providing care and 25 h on housework, greatly reducing their capacity for paid work (Baxter, 2016). In addition, two years after the birth of a first child, only 16.5% of mothers are in full-time employment, with an

additional 41.2% in part-time (35 h or less) employment (Wilkins, 2016). OECD (2017) research has found that among partnered Australian working mothers, 45% work part-time, with four-fifths of these parents citing their employment status as being due to family commitments. Australia also has the fifth-highest rate of part-time maternal employment in the OECD.

Our research focuses on mothers living in Perth, Western Australia (WA). WA has a "boom-or-bust" resources-based economy, and the largest gender pay gap in the country, at 22.5% compared to 15.3% nationally (ABS, 2018). The Filling the Pool report (Fitzsimmons and Callan, 2015) describes Perth's corporate and social culture as highly masculine, and based on highly male-dominated sectors such as mining, energy and construction, with a lack of flexibility and negative attitudes towards employees using flexible work arrangements.

The barriers to getting back into work as a full-time employee such as workplace discrimination and unpaid care/household responsibilities, may lead mothers into self-employment or entrepreneurship. This can be a "last resort" of women driven out of the workforce, but also gives mothers more autonomy to choose their hours and have more time to spend with their family (Seet et al., 2008). Self-employed individuals can be defined as persons "who own and work in their own business" (OECD, 2017, p. 110). We follow Damman and Von Bonsdorff (2021) in recognising that the set of self-employed people is highly heterogeneous in nature in that it refers to the employment of both employers and individuals who work for themselves. We also adopt the recognition in the literature that acknowledges that there is a significant overlap between self-employment and entrepreneurship and to some extent, the terms are used inter-changeably (Parker, 2004, Douglas and Shepherd, 2002, Dvouletý, 2018). This is especially so for people who initiate innovative actions in the entrepreneurial process (Schumpeter, 1934, Block et al., 2017, Hébert and Link, 2006). In our study, these are mothers who may adopt sharing economy platforms innovatively to overcome

labour market barriers. For them, it may start as self-employment, whereby the individual starts a new venture and operates as a sole trader or even informally. Depending on the opportunities available and the aspirations of the individual, there is an opportunity for the business to grow beyond self-employment to formalise its operations and employ other people (Fisher and Lewin, 2020).

Despite often having significant skills and experience, mothers may find it difficult to promote themselves and access markets from their homes, resulting in a so-called labour market failure (Carter et al., 2015).

#### The sharing economy and mobile P2P apps

In the face of these barriers, the rise of digital platforms and the sharing economy offers considerable potential for self-employment or entrepreneurship for mothers which could explain part of the recent rise in numbers of so-called digital mumpreneurs in Australia (Nelson, 2018). The opportunities associated with the digital economy may allow for a larger reach depending on the nature of the enterprise, creating low barriers to entry even for an international enterprise (Nel et al., 2010).

The sharing or on-demand economy is projected to grow from \$14 billion in 2014 to \$335 billion by 2025 (Yaraghi and Ravi, 2017). This sets the stage for a sharing economy in which the 9-to-5 work week is becoming increasingly obsolete (AiGroup, 2016), leading to Payton (2017, p.1) asserting that the changes offered by such technological advances are "giv[ing] rise to the portfolio worker, who freelances with multiple employers. Aided by digital technology, labour is becoming mobile and independent", offering "advantages and challenges" (Payton (2017, p. 4) to employees and employers alike.

Both the World Economic Forum (2016) and the global consulting firm McKinsey (Manyika et al., 2013), in assessing technologies that have the greatest economic impact and potential to cause disruption by 2025, identified that the mobile Internet and cloud technology

as having one of the most significant impacts. This facilitates P2P platforms which have been identified as a particularly disruptive innovation (Richomme-Huet et al., 2013).

There is a dearth of research on whether these P2P platforms can provide more opportunities for specific groups of people, like female entrepreneurs with children, or for enabling labour force participation among marginalised groups.

This research investigates the potential that a mobile sharing economy platform (P2P) provides for mothers to achieve a greater workforce participation. This case study focuses on an Australian-developed app, Jugglr, which is a sharing economy platform that "empower[s] local mums, like you, to work". The app describes itself as "a trusted network of local mums, united in the support of women working the way they want to work"; in other words, it aims to support mothers to make use of the support of other mothers to engage in employment (whether self-employment or traditional employment). Jugglr's website states that the app "allows you to juggle life, your business, career, kids, home, and personal needs whilst earning money" (M3B Labs, 2018). However, Jugglr users are not limited to contacting mothers in their school/ kindergarten community. Jugglr can act as a P2P marketplace in which mothers can provide and consume each other's services. This places the app in a unique market position by providing a platform for mothers to meet, combined with a culture of labour market support and a platform for cooperative childcare (therefore providing a function for self-employed mothers and those looking to enhance their employability prospects), as well as a marketplace for mothers to get a diverse range of their needs met – from housework to small business support and beyond – while also potentially accessing opportunities for entrepreneurship.

#### LITERATURE REVIEWAND THEORETICAL FRAMEWORK

In this section, we review the literature on employability and the relevance of perceived selfemployability. This is followed by an elaboration on the heterogenous nature of the term selfemployment, which we argue can be used interchangeably with entrepreneurship. It finishes off by discussing the research behind two of the factors that contribute to perceptions of employability, namely Skills Deterioration Theory and Signalling Theory.

#### **Employability and Perceived Self-Employability**

Although there is no unanimous view of employability, generally, as a concept, it refers to the ease of a person getting a new job (Berntson and Marklund, 2007). Researchers see employability as a means to provide job security through the so-called employability security in the context of the modern labour market where individuals have to operate in a relatively more volatile environment as compared to the past given the demands of increasing competition, disruptive technology and globalisation (Berntson et al., 2006). It follows that individuals must be increasingly responsible for maintaining their job security and for their own career development. This is very different to the logics of traditional employment (permanent, fulltime, and emphasising a long-term relational bond) (Berntson et al., 2006, Callanan et al., 2017). There is evidence that the individualisation of the labour market is driving the trend for individuals to be employable (Garsten and Jacobsson, 2004). For this study, we follow Berntson and Marklund (2007) in viewing employability as being based on an individual's perception of his or her opportunities in the labour market. In particular, we are interested in individual mothers' perception of their own possibilities of getting employment i.e. selfperceived employability. Research around the future of work suggests that society is transitioning to a more flexible model of employment, which transcends time/spatial boundaries (Callanan et al., 2017) which may offer more opportunities to mothers.

Given this "pull" factor and considering the "push" factors from serious obstacles to balancing motherhood with traditional employment highlighted earlier, self-employment can offer an alternative. It is already estimated that working mothers are up to three times more likely than other working women to be self-employed (Foley, 2016). Therefore, in this paper, our focus is on perceived self-employability. More specifically, we follow Rothwell et al.

(2009) in studying the self-perceptions of mothers on self-employability or self-perceived self-employability.

#### **Human Capital and Skills Deterioration Theory**

Human capital theory suggests that human capital (i.e. the combination of knowledge, skills and abilities of human resources) plays an important role in employability and organisational outcomes (Becker, 1964, Lepak and Snell, 1999). Under human capital theory, employers may be reluctant to hire candidates who have taken a break from the workforce, because they may need to be re-trained and upskilled. This phenomenon is referred to as skills deterioration, skills obsolescence or skills decay De Grip and Van Loo, 2002). If held separately from signalling theory (which is discussed below), then whether this break was due to caring responsibilities or unemployment should not matter, nor should gender. It seems reasonable to state that in some industries, knowledge will change at different speeds from others, and also that the amount of time that the career was interrupted would also be relevant. Beblo and Wolf (2002) estimate that when the heterogeneity of position and industry are considered, human capital depreciates from over 50% to 33% for a one-year break, versus zero percent for part-time work; however, they acknowledge that they are not able to identify to what extent this is due to skills depreciation or to stigma.

In the context of parents who take a career break to look after children, they would have lost skills (skill deterioration) and information on the résumé signals that employer stereotypes or assumptions may be applied (Weisshaar (2018). In some industries, knowledge will likely change at different speeds, and the amount of career interruption time would also be relevant. Systemic discrimination, occupational and job segregation, wage inequality, the sexual division of unpaid labour, and more limited returns on education and experience all challenge a woman's ability to achieve labour market equity with male counterparts because they prevent full usage and recognition of her human capital i.e. knowledge, skills, and abilities (KSAs).

Edin and Gustavsson (2008) find a statistically significant, strong relationship between time out of work and skills. However, as Weststar (2011) asserts, KSAs, acquired in non-market-based circumstances or informal training, are undervalued in the workplace. While mothering work ordinarily involves diverse skills – from time management to budgeting, research to conflict management – it is generally considered to be a career gap, rather than an employability boost.

#### **Human capital and signalling theory**

Signalling theory, developed by Spence (1973), gives a different perspective to human capital. It argues that employers use signals (e.g., educational attainment, work experience) to identify individuals with certain sets of valuable traits that cannot otherwise be observed directly. The theory suggests that human capital by itself does not enhance productivity, rather employers use it as a signal to identify candidates' potential productivity, including their ability to learn on the job (Pericles Rospigliosi et al., 2014).

Weisshaar (2018) also finds that parental leave signals to employers that the candidate deviates from ideal worker norms. She finds mothers who remain strongly employable in terms of KSAs may still find themselves penalised based on résumé signalling. This is reinforced by Kleven et al. (2018) who found that Danish men and women have a relatively low gender pay gap until after the birth of their first child, when women's pay drop dramatically and their careers never recover, despite 78.8% of Danish women aged 15-64 participating in the labour market. While 77.4% of Australian women in that age group also participate, Australian women are much more likely to be part-time workers (OECD, 2017).

With gender division in the care for children and intensive motherhood expectations, many mothers are under time-related stress as they attempt to juggle dual earner and carer roles, which have become the norm (Chapman et al., 2014). This has led to low full-time workforce participation of mothers, and over-representation in part-time and casual work, in

many countries. This is particularly significant in Australia as over a third of mothers work less than 35 h a week. Long term, this may lead to serious economic vulnerability and mental and physical health problems (Anderson and Winefield, 2011, Kim and Gray, 2008).

## Modelling the intention of re-using and promoting p2p apps for self-employment among Mothers

P2P platforms can offer a means to enhance the employability, especially self-employability opportunities, of mothers by giving them options to improve their signalling to potential employers and address issues related to skills deterioration. This is largely done through the recognition of the social nature of how mothers interact with each other in both social and commercial settings, and how mobile P2P app features can enhance the social aspects of these contexts. To shed more light on the earlier qualitative findings and examine what factors influence users' intention to continue using the app in the future, we quantitatively tested a model inspired by the technology acceptance model (TAM). This is important as despite the growing user base of sharing economy apps on smartphones, scholars have paid little attention to their acceptance and usage (Eltringham, 2017). Moreover, future intention is argued to be more important than initial usage in the contexts of apps (Wang et al., 2019).

Technology acceptance refers to a person's willingness to employ technology for the tasks it is designed to support (Dillon, 2001). The TAM explains an individual's behavioural intention to use technology through perceived usefulness and perceived ease of use. It explains users' adoption and usage of a new technology and has been applied in studying the acceptance and usage of P2P platforms (Min et al., 2018, Ye et al., 2019). However, the promotion side has also been ignored in the TAM (Davis, 1989), an important aspect based on the social nature of P2P apps.

We draw on the TAM and propose and test a model to explain the individual's usage and promotion of the Jugglr app. Specifically, we examined the role of sign-up difficulty (as a proxy

for perceived ease of use in the TAM), perceived usefulness, applicability (not available in the TAM), and app performance (not available in the TAM) in fostering intention to continue using the app in future and promoting it to others through WOM. This brings in the social element into the model by including WOM which addresses the promotion side ignored in the TAM (Davis, 1989) and is an important aspect based on the social nature of P2P apps. The proposed model evaluates the key elements in the success of the app. Building upon the e-commerce system success model, previous research (e.g. Wang et al. (2019)) has constructed app success models with electronic WOM and intention to reuse as the key outcome variables that positively contribute to the success of an app. The proposed model tested in the current study is consistent with this and helps evaluate the success of the Jugglr app and the key factors which impact the intention to re-use the app and positive WOM, as proxies to measure the app success. Specifically, this study examined the impact of difficulty of signing up, usefulness, applicability, and performance on intention to re-use the app and subsequently positive WOM.

Usefulness measured the degree to which various services offered by the app were perceived to be helpful by mothers using the app. Applicability measured the various employment opportunities created by the app for mothers. Performance measured users' evaluation of the app's performance. Intention to re-use measured mothers' willingness to use the app again in future, and WOM measured their intention to promote the app to other mothers through positive WOM. The following research hypotheses were formulated based on TAM:

H1: Sign up difficulty is negatively associated with intention to re-use the app.

H2: Usefulness is positively associated with intention to re-use the app.

H3: Applicability is positively associated with intention to re-use the app.

H4: Performance is positively associated with intention to re-use the app.

H5: Intention to re-use the app is positively associated with WOM.

#### **METHODOLOGY**

This research project used a pragmatism-based approach, combining qualitative and quantitative data collection and analysis for breadth and depth of understanding and corroboration of the phenomena (Johnson et al., 2007). Pragmatism focuses on actions and their effects (James, 1975) so a pragmatic researcher aims to ascertain the understanding of the relationship between actions taken and their effects in a given context (Feilzer, 2010). This pragmatism-based approach allows for a combination of qualitative and quantitative methods to enable researchers to be flexible in their investigate techniques as they endeavour to collect and analyse data in different ways, thereby using different methods to answer different objectives of the research question (Johnson et al., 2007). This allows researchers to expand and strengthen the conclusions and, therefore, contribute to the published literature (Onwuegbuzie and Leech, 2005).

Instead of choosing either quantitative or qualitative methods, the pragmatism-based approach uses both methods as an extension (Johnson and Onwuegbuzie, 2004) so as to maximise the strengths from both methods and minimise the weaknesses of a more traditional single approach (Mitchell and Education, 2018). The quantitative study aimed to help compensate for qualitative data that typically cannot be generalised while the qualitative study aims to help explaining the relationships discovered by quantitative data (Onwuegbuzie and Leech, 2005). These different methods can inform and supplement each other because they address different objectives of the study (Teddlie and Tashakkori, 2003). Adopting multiple perspectives can produce a more comprehensive picture, to avoid the potential biases from the adoption of single method design, and be a way of elaborating and developing preliminary findings (Denscombe, 2008), leading to better decisions and robust conclusions (Davenport, 2009).

To that end, the qualitative part of the study explored why would mothers be encouraged or put off from using such P2P platforms to overcome self-perceived barriers to self-employment or entrepreneurship. Although such P2P platforms may be new, their success in helping mothers overcome their employability and entrepreneurial barriers will only helped if they continue using the platform and whether they would encourage other individuals or organisations to use the platform. The quantitative part of the study measured the success of the app and examine various factors which influences the app's success among mothers, in particular, factors that would affect mothers from re-using the platform and whether they would recommend it to others.

The integration of quantitative and qualitative methods translates itself from a pragmatism-based approach to case study research whereby the focus on the research context rather than on the method, and various ways of data collection is used to answer the research question(s) (Creswell, 2007). Case studies have been identified as an important way to understand the complexities of the innovation process (Hindle, 2004), in this instance, the introduction of an innovative app aimed at helping support returning to work and starting entrepreneurial initiatives among mothers. Case studies often use a variety of lenses or a combination of qualitative and quantitative data to improve validity and also allow for multiple facets of the phenomenon to be revealed and understood (De Massis and Kotlar, 2014). For example, North et al. (1998) combined case studies with surveys in their study of small business quality management. Eisenhardt (1989) comments that qualitative case studies can be extended along emergent theory lines to include follow-on cases and other research like questionnaires. Christensen (2006) supports this position that using different methods and approaches to study management phenomenon, especially at the exploratory stage, will aid in building theory. For this reason, we collected both qualitative and quantitative data for the research.

Case studies perform an important contribution to theory development (Eisenhardt and Graebner, 2007). In particular, exploratory case study research is the recommended design for studying phenomena that are subtle and/or poorly understood (Eisenhardt, 1989, Miles and Huberman, 1994). Case studies are important in this perspective as they deal with the "how" and "why" questions that need to trace operational links over time, rather than just frequencies or incidences (Yin, 1994). In the context of the sharing economy and especially the acceptance and adoption of P2P apps that aim to support employability and entrepreneurship, there has been limited research but there is enough anecdotal evidence and some empirical findings supported by secondary material that suggest that potentially rich data can be uncovered to further the understanding of the complex nature of some of the issues being investigated Bryman (1989).

As the Jugglr app was novel and its target user base was not an established one, the uniqueness of the motherhood and app usage experiences was essentially a socially constructed one, which lends itself to case study research, in particular a single-case study design (particularly useful in developing a deep understanding of phenomenon that are complex, ambiguous, and about which little is known) (Dodgson et al., 2021, Amarakoon and Colley, 2022, Badoiu et al., 2020), and the application of the Gioia methodology (Gioia et al., 2013). The case study method is better able to analyse "fragments of entrepreneurial activity that are understood in their processual complexity without claiming any direct transfer to other contexts" (Steyaert et al., 1996, p. 67).

Taking respondents from a broad spectrum may produce results that may not be comparable and more significantly may not be valid, even if they were women. In particular, it may violate a criteria that Lincoln and Guba (1985) claim is needed for reliable qualitative research, namely transferability. Transferability is the construct corresponding to external validity or generalisability in conventional qualitative research. In other words, it is important

that the cases described can be transferred to other settings so that the research can be tied to a general body of theory. To address some of these concerns, 4 major criteria were developed, and potential respondents were asked to confirm this as part of the participation in the subsequent research. These were:

- (1) A mother,
- (2) Have work experience before having children,
- (3) Experience of using social media applications like Facebook and
- (4) Willing to download the Jugglr app and use it for a month.

These criteria were used to as screening questions and applied to a random sample of women contacts above the age of 18 secured from the Electronic White Pages in the Perth metropolitan region. This sampling method was used to limit the problems of retrospective and survival bias from respondents that are commonly experienced in case study research (Van de Ven, 1992).

In mid-2018, an accredited survey research organisation was engaged to conduct the data collection via telephone recruitment, screen the potential respondents and give instructions on the research procedure and inform about ethics approval and conditions. Once participants understood the research process and agreed to participate, they were instructed to use an app by installing it onto their mobile devices. The respondents were encouraged to use the app and services for 4-6 weeks before a second call was made.

As we were working with the industry partner who was updating and improving on the app, some of the issues that were raised by the users of the app are appropriately treated as an on-going process or "a process of becoming" (Steyaert, 1997). Following Steyaert and Bouwen (1997)'s identification of the importance of gathering "rich" data, information was collected primarily via a telephone survey that allowed participants to give qualitative and quantitative responses. A telephone survey was used because interview guides have lower reliability than standardised questionnaires (Harrison, 2009).

A sample of 201 mothers who agreed to trial the app was obtained. In the follow-up call, they gave their responses to a longer set of questions to gauge the experience of using the app (e.g. how was the download and installation experience, what and why did you like / not like about the app, what and why did you use the app for, would you recommend it to others and why/ why not, what additional features would you like and why, how has the app helped you, if at all, in terms of finding help and opportunities and other items relevant to employability and entrepreneurship).

Of the 201 mothers who met the criteria and agreed to trial the Jugglr app, only 150 completed both phases of the research. Over one-third of the sample did not download the app (35.8%); the top two reasons given were a lack of time (18.4%) or having forgotten to download it (11.9%). This relatively high level of non-participation may be related to the time stresses associated with motherhood (as will be discussed in the next section). Accordingly, analysis from this point onwards is limited only to the 150 mothers who downloaded the app and completed the second stage of telephone survey. The respondents were given the option to verbally give their responses on the phone or via an online survey. However, only 4 respondents used this online option, and we did not include their responses in the analysis. The responses were classified to a pre-determined structure covering a consistent range of issues to allow easier analysis across respondents, including open-ended responses.

Detailed inductive coding (Saldana, 2009) and thematic analysis was conducted to analyse the qualitative data. The coding was done collectively and relied on intensive group discussion and simple group "consensus" as an agreement goal (Saldana, 2009, Harry et al., 2005). Following a demographic overview, the findings are presented under the 1<sup>st</sup>-order concepts, 2<sup>nd</sup>-order themes (Trust, Security, Impersonality, Time, Age, Services) and aggregate dimensions (app-related barriers and non-app-related barriers) (Gioia et al., 2013). Finally, based on the qualitative findings, we quantitatively tested a model to explain respondents'

usage and promotion of the Jugglr app using partial least squares structural equation modelling (PLS-SEM), focusing on the app's perceived ease of use, usefulness, applicability and performance in encouraging future utilisation and promotion for self-employment purposes.

The quantitative data was used to examine the underlying reasons for mothers' intention to reuse and promote the app via WOM. The items for measuring WOM were adapted from Cheung and Lee (2012). The other measures (Sign Up Difficulty, Usefulness, Applicability, and Performance) were self-developed together with the research partner that had developed the Jugglr app as there were insufficient established scales to meet the bespoke needs of facilitating future app development. We quantitatively tested our proposed model using PLS-SEM due to its predictive capabilities. PLS-SEM offers a balance between explanation and prediction (Shmueli, 2010) and has better predictive accuracy than factor-based SEM across a broad range of conditions seen in applied research (Evermann and Tate, 2016). Therefore, it has been increasingly used across a range of disciplines and fields such as marketing (Hair et al., 2012), education (Shafaei and Razak, 2016), accounting (Nitzl, 2016), and human resource management (Nejati et al., 2017).

While covariance-based structural equation modelling (CB-SEM) was the dominant method for analysing complex interrelationships between observed and latent variables, in recent years, the number of published articles using PLS-SEM increased significantly relative to CB-SEM (Hair et al., 2017) as it enables researchers to estimate complex models without imposing distributional assumptions on the data. In identifying the appropriate statistical modelling approach for testing study hypotheses, one should understand the distinction between explanatory modelling and predictive modelling (Shmueli, 2010). Following the considerations proposed by Hair et al. (2019), this study used PLS-SEM due to its exploratory nature which involved testing research frameworks from a prediction perspective.

The analysis was carried out using the SmartPLS 3 software. We followed the recommendations of Hair et al. (2012) for PLS algorithm (i.e. path weighting with a maximum of 300 iterations, and a stop criterion of 10<sup>-7</sup>). Moreover, we conducted bootstrapping analysis with 5,000 resamples to measure the significance of the relationships.

#### RESULTS

#### **Sample Demographics Characteristics**

For the respondents, 86% of the sample have spent most of their life in Australia, with others having spent most of their lives in a range of countries such as Afghanistan, Burma, Bhutan, Canada, England, Ireland, New Zealand, Philippines, Russia, and South Africa. Prior to childbirth, 86% of the sample worked full-time, 3.1% worked part-time, 4.7% worked casually, and 3.1% were engaged in full-time home duties. After childbirth, only 26.4% worked full-time, 37.2% worked part-time, 10.1% worked casually, indicating total labour market participation of 73.7%. Only about 14.7% were engaged in full-time home duties. 3.9% of the sample were on maternity leave and intended to return to a full-time employment, while 3.1% were on maternity leave and intended to return to a part-time employment role.

While previous research by Callanan et al. (2017) suggest that barriers to women reentering employment are declining, the respondents considered that on returning to work, they would experience a delay in promotion at work (20%), reduced work opportunities (27%) and lack of access to after work social function (21%) which are consistent with the "penalties" faced by women (Hennekam and Bennett, 2016). These are the kinds of barriers that Jugglr sought to address.

#### Reasons for Trialling the Mobile P2P App

Inductive coding was used to determine that there were 2 main reasons for mothers to download and use the app: (1) to connect to other mothers, much like a social media app; and (2) to explore both using, sharing and offering services, much like a traditional P2P mobile app.

Respondents were familiar with the social media and social connection functions of apps similar to Jugglr app and viewed it as a means of connecting with other mothers and identify similar challenges faced by their peers. Comments ranged from "I looked at it to see if I knew anyone, and I was looking for a playgroup" to "I did not use it much I just mainly browsed and looked at all the people in my area". Several respondents where curious about the app and what was offered on the platform, as one respondent put it "I just wanted to see what other mums were doing, I'm on leave at the moment", "I just had a good look at it to see what was available… to see what other users were engaging with the app", "What services I could provide and what I needed. What users were in my area".

Given that the focus of our research was on sharing and offering services, our subsequent analysis focuses on the responses to their real and/or perceived usage of the app in terms of the services they used or were expecting to use after they downloaded and installed the Jugglr app.

The Experience of Using, Sharing and Offering Entrepreneurial and Self-Employability Services on the Mobile P2P App

Table 1 below shows the respondents' replies when asked to consider if the Jugglr app provided useful services related to various employability services (including self-employment or entrepreneurship) and support services.

Insert Table 1 about here

The top five replies, based on the level of agreement with the statements, centred on personal wellbeing, the home and children. The bottom two responses by agreement related to business development and office management

Health and wellbeing were considered the most useful service, which can be interpreted as indicative of the need for mothers to practice self-care, and the time-stress involved in

activities like attending salon appointments with a child. Personal development was considered the next most useful service, with help around the home and with children coming third and fourth respectively. Home office help and small business marketing were considered the least useful services, likely because these are services which would arguably only benefit small business owners.

The open-ended comments indicated just over a quarter (39 or 26.0%) merely browsed to see what was on offer, and presumably did not find anything of sufficient interest to use. They were looking for mums or services in their area, for playgroups, childcare and school pick-ups and drop-offs. A significant number of respondents (22 or 14.7%) indicated in open-ended responses that the service was not of use to them: "having no use of the services the App provided". It could be instructive for future research to gather data on what sorts of services those mothers did feel they would need. Some mothers also indicated that they did not feel the need to use the services, as they already had sufficient support or social interaction. One commented that everything on the app they already had available on Facebook, which may indicate more competing services for mothers than were unearthed from the literature review for this research.

When asked about how they would use this mobile P2P app in the future on a 1-5 scale, the likelihood of using services ranged between 3 for health and wellbeing, 2.8 for help around the home and 2.6 for help with children and events and fun respectively, to only 2.0 for small business marketing and home office help. It is notable that participants were not overly likely to seek help around the home or with their children. Also, in practice, relatively few participants used services during the survey period, which contrasts with these intentions. Given the relatively low intention to continue using the app in the future, our quantitative analysis which investigates the underlying factors contributing to mothers' intention to continue using the app

again in future complement our qualitative findings and offer greater understanding around the reasons for the intention to re-use the app in future and promoting it to others through WOM.

Enhancing Self-Perceived Self-Employability Opportunities through the Mobile P2P App

About 39.8% of participants indicated that the app offered new opportunities for income generation, suggesting an interest in self-employment activities among the sample. This is particularly noteworthy considering none of the sample indicated that they currently engage in self-employment, and only two mentioned that they had offered services on the app. The interest in self-perceived self-employment is consistent with Suseno and Rowley's (2018) view that technology can provide a means of perusing such activities; however, the lack of respondents who had taken the next step suggests that while the motivation is there, obstacles lie in the way.

There were also a significant number of respondents who considered the app useful for connecting with other clients, improving networking for future employment, and creating new business. Again, this self-perception suggests an interest in self-employment, especially considering only 32% of participants felt that such an app would be useful in accessing (traditional) employment.

#### Overcoming Barriers to Usage of the Mobile P2P App

During the survey, respondents were given the opportunity to provide open-ended feedback regarding their real and/or perceived usage experiences, as well as reasons for not using the app after its download. Through the thematic analysis, a few concepts were identified that constituted each theme. Six themes were identified that could be further classified into two main aggregate dimensions of app-related and non-app-related barriers. This is illustrated in Table 2 and Figure 1 using the data structure suggested by Gioia et al. (2013).

Insert Table 2 about here

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### Insert Figure 1 about here

While six themes were evident, our data showed that there may be some overlap between the themes, for example trust and security are linked and some of the themes such as time and age (older) are highlighted in Figure 1, it was the detailed thematic analysis of the text that brought up issues around the mismatch of the services provided by Jugglr and its target market. The main themes that we found are elaborated on below.

Trust and security. In order for sharing economy platforms to function effectively, there is a need for a high level of trust, both between users and between the users and the platform provider (Richardson, 2015). As seen in Table 2, trust and security issues were an important aspect of concern for mothers using the app, especially in terms of the enhanced features. These two issues were also associated with theme of Impersonality of Technology as respondents were more comfortable building trust face-to-face.

Mismatch in service expectations and offerings/product-market fit. One of the largest group of responses are related to the lack of service offerings, their relevance to the needs of the Jugglr app users, familiarity and gap in expectations in terms of using the new Jugglr app, common issues that have been found as the smartphone app market matures (Furner et al., 2016). Factors such as the age group at which the services were targeted and need for more stringent security measures were also cited as issues. Most of the services were aimed around childcare and running of a home for young mothers; however, if the users of Jugglr were trying to address the skills deterioration to start their own business or pursue self-employment, then these services were not evident.

*Impersonality*. Face-to-face interaction has in the past formed much of the basis for trust development. The lack of such interaction in terms of the sharing economy platform, especially with regard to communicating, sharing and transacting through a technological medium, has

engendered much debate concerning the issues around impersonality for these platforms (Schor, 2016). Many respondents in the research agreed and felt that using the Jugglr app heightened the issues around impersonality, which also hindered the use of the Jugglr app for financial transactions. Concerns over security were also raised in relations to services provided for children.

Lack of time. Given that there are thousands of mobile apps on the Apple App Store and the Google Play Store, and there may be dozens of apps that are on the users' smart devices, the lack of time available to learn how to use new apps effectively has often been cited as a barrier (Farley et al., 2015, Hew and Brush, 2007). This is similar among our respondents, who have the added time pressures of maternal and other associated responsibilities.

Age-related factors. Research has found that there is a "grey gap" in the use of the Internet, whereby those with a younger cognitive age use the Internet more than those with an older cognitive age (Eastman and Iyer, 2005), and there are similar findings in terms of using smartphones and mobile apps (McGaughey et al., 2013). Our respondents reflected similar issues. Age also related to product market of the respondents stated that services offered were not aimed at children or mothers of their age.

Intention of re-using and promoting P2P apps for self-employment among mothers

Upon confirming the measurement model in terms of convergent validity (all variables having acceptable average variance extracted greater than 0.5), discriminant validity (confirmed through heterotrait-monotrait (HTMT) ratio criterion), and reliability (all variables had a composite reliability of 0.7 or higher), we proceeded to test the proposed structural model. First, we verified the model fit and assessed collinearity. The value of goodness of fit generated through the standardised root-mean-squared residual (SRMR) for this study was 0.10, which is within the recommended range, suggesting that the model fits the empirical data (Henseler et al., 2017, Latan and Noonan, 2017). In addition, no collinearity problem was observed in the model as the

values of variance inflation factor (VIF) for all predictors in the model were less than the recommended value of 3.3 (Henseler et al., 2017).

Then, we ran the bootstrapping analysis. Our results (Table 3), show that only perceived usefulness of the app and its applicability in creating employment opportunities were significant predictors of mothers' intention to re-use the app (R<sup>2</sup>: 0.62). Moreover, intention to re-use the app was significantly associated with WOM (R<sup>2</sup>: 0.05). Since the users had already signed up for the app, it is understandable why sign-up difficulty would not be a determining factor in shaping their intention to re-use the app. However, interestingly, our results (Figure 2) reveal that when it comes to deciding whether to use the app again in future, performance of the app is far less important than its perceived usefulness and applicability in terms of creating various employment opportunities for mothers.

Insert Table 3 about here

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Insert Figure 2 about here

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Finally, we performed blindfolding analysis with an omission distance of 7 and found that the generated cross-validated redundancy values (Q<sup>2</sup>) for the endogenous variables were higher than zero, further supporting the model's predictive accuracy. Post hoc analysis of the data revealed that mothers who had a full-time work prior to their childbirth were significantly more likely to recommend the app to other mothers (i.e., positive WOM) compared to mothers who had full time home duties prior to their childbirth. No other significant differences were observed for WOM among other categories (e.g., part-time work, casual work).

#### **DISCUSSION**

The use of mobile P2P apps provides a unique context in which to study the decisions to engage in such technology-related sharing economy platforms among mothers in terms of

enhancing their self-perceived self-employability and entrepreneurship in the Australian context.

#### **Contribution to Theory**

This study advances theoretical development in that while there are studies that purport to examine what is happening among women regarding employability post child-birth, there are few that have looked into the issues surrounding the opportunities and barriers for mothers in terms of accessing and engaging with disruptive innovations like sharing economy mobile P2P apps (Parry and Battista, 2019).

Human capital and skills deterioration theory. First, the P2P mobile app has the potential to reduce skill deterioration while also leading to skill accumulation that is relevant to employability and self-employability. Although time-stress and being "time poor" were common responses as to why the respondents did not download the Jugglr app in the first place or did not use the app to its fullest potential, the respondents recognised that they needed to keep up with their human capital development as personal development was ranked more highly when compared to home and child help in terms of features that the mothers wanted. This would suggest that mothers are seeking ongoing opportunities to build networks, further their career and learn new skills.

The sharing economy can help to empower mothers to work by reducing their hours spent in unpaid care/house duties, potentially minimising the career break penalty (Schoenbaum, 2016). It can also create networking opportunities which bring likeminded mothers together as they learn from each other and explore their potential in formal and informal settings (Stephany, 2015).

However, on deeper analysis, the results (in Table 1) indicate that the respondent mothers are more focused on employability support services (e.g., personal development, accessing help for their home and parenting responsibilities) as compared to primary

employability services (e.g., capitalising on the Jugglr app to market professional skills). According to previous research, it is primary employability skills that may assist to counter skills deterioration over a career break (Van Loo and De Grip, 2002). Surprisingly, despite the sample indicating that professional development opportunities were the most helpful service the Jugglr app could provide, it was the service least likely to be used. It may be the case that before exploring how mothers can benefit from professional development, they will have to navigate through and reconcile their complex multiple personal, professional and social identities (Ramarajan, 2014, Reid, 2015).

Yet it may be that when it comes to self-employment and entrepreneurship, which is one aspect that the P2P apps was supposed help mothers with, these primary or secondary employability skills may not be the primary factor. Instead, the P2P app may be helping mothers build a new and different set of skills that may be more related to self-employment or entrepreneurship. This may be a combination of aspects of social capital (like building key networks) (Suseno and Pinnington, 2017) or understanding what opportunities are available in the market (Ramoglou, 2021) or testing various business models (Zott and Amit, 2017) or rapidly prototyping of minimum viable products or services (Contigiani and Levinthal, 2019). Ironically, these are currently part of the skills and competencies mix which employers are looking for in terms of new hires that are able to work innovatively and effectively in a volatile, uncertain, complex and ambiguous (or VUCA) world (Mack and Khare, 2016, Seet et al., 2018b, Payton, 2017).

Human capital and Signalling Theory. Second, from the perspective of signalling theory, the respondents recognised the potential of the app to help mothers who despite having maternal responsibilities, signal to others that they have the capacity to use their skills and experience gained before motherhood. Although there were quite several both technology and non-technology related barriers, the app helped connect mothers to opportunities for meaningful

"gig" work to allow them to use their skills in the form of self-employment through both paid and unpaid reciprocal arrangements. This finding is in line with the special issue's call in that it provides nascent evidence that such sharing economy platforms can be useful in helping bridge labour market gaps as recruitment and entrepreneurial tools for mothers hoping to return to the labour market after childbirth.

One interesting finding based on the responses was the tensions that the respondents had in terms of signalling their status of being a mother (carer) versus their status of their work or profession (earner). Our sample had a high rate of labour force attachment, mostly in nonstandard work despite having been overwhelmingly in full-time work previously and this suggests that hours have been cut back to balance these two roles. Many participants expressed an interest in using the app to meet other mothers in a social context, reinforcing the salience of their identity as mothers. In this sense, our study reflects the challenges of identity construction of working women transitioning to motherhood as highlighted by Ladge et al. (2012) in that mothers who may have strong professional backgrounds experience complex identity transitions when their established work identity must be adapted to be integrated with a change in a nonwork identity (e.g., becoming a mother). The signals sent out therefore appear paradoxical given the multiple identities of the mothers (Ramarajan and Reid, 2013).

This tension may be exacerbated by sharing economy technologies like the P2P mobile app in that about half of the sample (50.4%) expected to have poor work-life balance after returning to work, with 67.5% expecting to have high levels of stress. This suggests that for many mothers, not only is there a tension in identities, but they also recognise the sharing economy may result in meaningful "gig" work that may have unfavourable effects on their wellbeing with such technologies increasing the potential for overwork through the near 24/7 accessibility (Melián-González and Bulchand-Gidumal, 2018) and thereby increasing the potential of overwork, stress and burnout (Parry and Battista, 2019).

However, related to the findings from skills deterioration, the new set of skills that are related to self-employment or entrepreneurship may act as positive signals signal to potential employers or investors (who can be considered as a special type of employer for entrepreneurial ventures (Harrison and Mason, 2019, Wright et al., 2019)). For potential employers, if a mother is able to use the P2P app or similar sharing economy platforms to develop new skills and new services while being self-employed, this may signal that she is able to overcome the barriers of lack of time and age-related factors (that are mentioned above) while pointing to her ability to work autonomously, intrinsically motivate herself and effectively balance work-life tensions to meet her own and her clients' targets (Stephan et al., 2020).

Technology acceptance and sharing economy platforms. Third, the analysis using PLS-SEM reinforced the importance of perceived usefulness and applicability of the P2P app in creating employment opportunities that could significantly affect the mothers' future use. These factors combined with the relative difficulty of signing up to the app were crucial variables determining the decision to recommend the app, which could limit or propel the future platform expansion of such P2P apps, and corroborates research on similar technologies deployed in other sectors e.g. FinTech (Lee, 2017), and food delivery services (Lee et al., 2017).

The quantitative results reinforced the qualitative findings of key app/technology and non-app/technology related barriers by finding that the perceived usefulness of the app and its applicability in creating employment opportunities (which includes self-employment or entrepreneurship) were significant factors in influencing the respondents' future use of the app. This in turn would significantly increase the likelihood of them promoting the app to others through positive WOM, an important factor given the social nature of P2P apps (Yao and Yu-Fei, 2018).

HR-entrepreneurship research and self-employment among mothers. Fourth, in recent years, there has been a growing interest in the intersection between human resources (HR) and entrepreneurship with the Kauffman Foundation sponsoring a best paper and best student paper award at the annual Academy of Management annual meeting in this area (e.g., Brymer and Rocha (2021), Waddingham et al. (2021)). In our study, we explored the experience of mothers, of how digital P2P platforms can affect their self-perceived employability and reduce skills deterioration and improve signalling and unlock human capital, through technology acceptance. In terms of human capital theory, the overall net effect is that there is potential among these sharing economy platforms to improve the quality and quantity of human capital among mothers to mitigate the negative effects of motherhood on employability, specifically self-perceived self-employability.

However, the actual picture may be more nuanced as the mothers did face barriers and the technology was not fault-free. It is notable that despite concerns being expressed about time stress and work-life balance, most participants did not make use of these services, or sign up for the app with the intention of using business development or entrepreneurial services. While the purpose of the app is to empower mothers to work and to understand how social media operates as an employability/entrepreneurial P2P platform, in practice, much of the interest was in using it for social purposes, rather than seeking employment or enhancing employability. This could be related to personal values regarding trust, security, and motherhood (Farmaki, 2019), and could perhaps be overcome through encouraging opportunities for face-to-face contact.

However, as noted above under skills deterioration, developing effective social networks as part of both enhancing social and human social capital (Suseno and Rowley, 2018) is a key competency among the self-employed or entrepreneurs (Seet et al., 2018a). These mothers may be using such technology platforms to test the water for a career change to self-employment or entrepreneurship.

Very few mothers reported that they were specifically looking for employment and career-related opportunities, and only two respondents took the final step to offer self-employment services (i.e., engaged in entrepreneurial activities through the platform). This could also indicate the meanings associated with identity issues highlighted above, and the associated expectations of appropriate time use, priorities and behaviours, which are even more complex when a mother transitions from a background of paid employment to self-employment (Hytti, 2010, Duberley and Carrigan, 2013). Dimitriadis et al. (2017) discuss the impact of social contexts on reinforcing or disrupting cultural beliefs about gender, describing the "gender identities" of occupations and activities. They state that beliefs associating women with personal qualities such as caring, selflessness and other-interest, and men with competitiveness, agency and self-interest, influence the nature of female entrepreneurial behaviour, encouraging women to self-stereotype themselves as unsuited to commercial activity, as well as potentially experiencing social backlash for undertaking activities associated with a masculine identity (Ahmad and Seet, 2010).

#### **Contribution to Practice**

From a practice-based perspective, there were no complaints among the users of the Jugglr app, and there has been an ongoing growth in the number of users, which indicates that the sharing economy may offer win-win benefits to working mothers and organisations alike. Voudouris (2004) states that flexible workers can give employers access to new competencies and a competitive advantage, while also improving capacity planning for periods of high and low demand.

The research showed that sharing economy-based interventions like Jugglr have the potential to connect entrepreneurial mothers with companies, by opening such digital platforms up to non-mothers as consumers. This would mean that mothers are able to offer services not only to other mothers, but also to business clients; unlike more general platforms such as

Airtasker, providers in this context would be limited to mothers, thus forming a corporate social responsibility intervention while also allowing companies to unlock the human capital of the maternal workforce. It also served as a very positive experience for a technology start-up in how to use collaborative university-industry research to re-orientate its business model from one solely based on mothers to one that connected mothers to businesses and other organisations (Universities Australia, 2019).

In terms of future app development, the research highlighted both app or technology related barriers together with non-app or non-technology related barriers to mothers. This was particularly helpful for the industry partner who was then able to secure additional funding to address the issues raised in future redesigns of the Jugglr application (Brown, 2018). From the qualitative analysis, the recommendation for the app developer was to work on a more user-friendly sign-up process. From both the qualitative and quantitative analysis, additional ease-of-use functions as well as more relevant applications specifically for mothers who may be considering self-employment or entrepreneurship. If these improvements were not made, the platform would be unlikely to have continued use among mothers, let alone recommendations for other new users to use the app.

The study also highlighted the need to target potential entrepreneurs with children and family care duties differently from other entrepreneurs. Our sample indicates that mothers do struggle to attend networking events, which in the personal experience of one of our researchers, are often either scheduled during kindergarten/school drop-off times or at night when affordable childcare is inaccessible and are rarely family friendly. This aligns with Ekinsmyth (2013)'s findings that mothers tend to network with other parents, within women's' entrepreneur organisations or online. She identifies that while this can lead to "business ghettos", it can also stimulate business and employment activities within these circles – as a respondent puts it in Ekinsmyth (2011), "traditional networking events (Business Link for

example) just do not cut the mustard as we women work in a very different way to grey-suited males."

#### LIMITATIONS AND FURTHER RESEARCH

First, as noted above, there were limited reports about our respondents completing paid transactions with other mothers via the Jugglr app. While only two of the mothers in our sample reported offering services, there are clearly mothers who are doing so, suggesting a non-representative aspect to our sample. Additionally, we do not know the number of children that the mothers who participated had, nor their ages. The time/space constraints associated with mothering a young child are different from an older child, and likewise mothering multiple children. While getting a large enough sample to screen for these characteristics may be difficult, it will be worthwhile to explore these in greater detail in the future.

Second, due to limited research funding and the priorities of the industry partner, this reduced the number of questions we could ask and our research did not explicitly ask mothers if they had engaged in any self-employment or entrepreneurial activities before; some of our sample may have already been self-employed or may have engaged in both traditional and self-employment. The focus of the research was to survey mothers to see if the P2P sharing economy app would help them as one of the purported benefits of such technology platforms is that they are meant to facilitate self-employment or entrepreneurship, and that one of the purported benefits of such sharing economy technology platforms is that they are meant to facilitate self-employment or entrepreneurship. Given time and resources, future research is needed to understand differences between those who have self-employment or entrepreneurial experiences versus those that did not. Also, as not all the participants used the app and the process of moving into actual self-employment or entrepreneurship would likely take much longer than the one-month usage time that the participants agreed to, the research focused on self-perceived self-employability rather than actual self-employability. In addition, like other

gig economy platforms that offered services, some of which involved face-to-face contact, the COVID-19 pandemic severely affected usage of the Jugglr app from 2020 onwards. In the future, research that can track the effectiveness of such platforms to convert mothers into actual self-employment or entrepreneurship would be invaluable.

Third, the quantitative section of our study was limited by its design and the measurement model which mandates caution when making any inference regarding causality and generalisability of the findings. Given the nature of the intention to re-use the app, this variable could only be measured through self-report than behavioural data. Nonetheless, the self-report bias could be a validity threat to the study. Moreover, while WOM has been added to our TAM-inspired model to investigate promotion of the app by users, given the low R-square for this variable, despite the significant link between intention to re-use the app and positive WOM in promoting the app, other important predicting variables, such as perceived trust, need to be included in the model in future studies to better explain and predict users' WOM. We would also suggest the need for longitudinal studies of mothers engaging in skilled "gig" work through digital platforms, to establish the extent to which alternative work arrangements are meeting the needs of entrepreneurial mothers both in the short- and long-term, and how outcomes could be improved.

Finally, the telephone survey data collection suffers from the limitations of limited triangulation with other sources (Alvesson and Skèoldberg, 2000). Although there were a relatively large number of respondents, as not all of them used the app to its full capabilities, some of the responses were "thin" descriptions and we were unable to secure deep contextual insights usually gained from single in-depth case studies done from an interpretive perspective (Dyer and Wilkins, 1991). Given more time and additional resources, further follow up interviews or surveys could have been conducted to get deeper insights into some of these issues.

## **CONCLUSION**

This study is in line with the call for researchers to explore factors such as technological changes that will affect employability, self-employment or entrepreneurship (van Harten et al., 2017), and this special issue's call for research on how the sharing economy brings about changes in work paradigms and HR practices. In particular, it attempted to explore the research question of understanding the contribution of mobile P2P platforms in facilitating employment for mothers, and challenges faced in accessing these technologies for the purpose of improved employment outcomes, and by providing evidence via research on users of a nascent P2P platform technology help build a better mobile P2P app which can allow more mothers exploit economic opportunities in the sharing economy.

This exploratory study contributes to further understanding the impact of P2P platforms to the potential future employability of women after childbirth. Our research contributes to theory by finding preliminary evidence that P2P platforms can help improve inclusiveness for mothers by enhancing self-perceived self-employability or entrepreneurship opportunities by reducing the negative effects highlighted by signalling and skills deterioration aspects of human capital theory.

Such technologies are currently nascent, and this transitory period will likely see further use of these technologies as means of addressing labour market participation in new and different ways.

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## **FIGURES**

Figure 1 – App/Technology and Non-App/Non-Technology Related Barriers

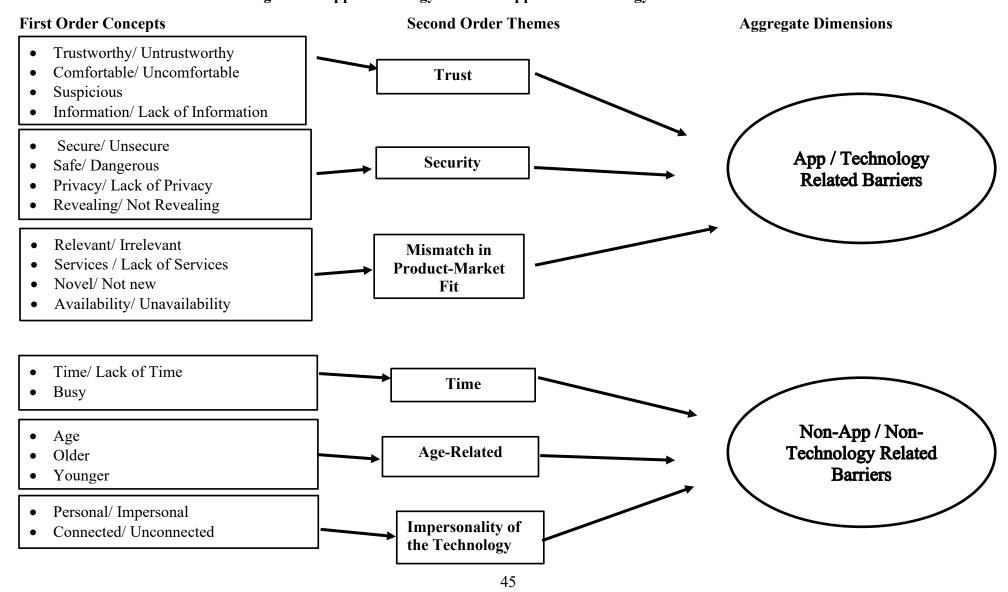
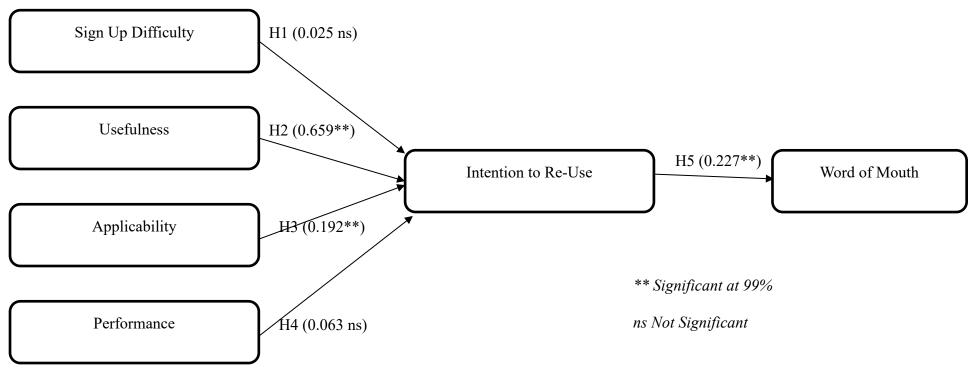


Figure 2 – Model for Understanding the Intention of Re-Using and Promoting P2P Apps for Self-Employment among Mothers



## **TABLES**

Table 1 – Employability Services and Support Services Priorities for Using Mobile P2P App

N=150	Mean	Std. Deviation
Health and wellbeing (personal training, beauty services,		
hairdresser)	3.26	1.237
Personal development (career coaching, learning new skills)	3.05	1.279
Help with kids (child minding, kids pickups and drop offs,		
tutoring)	3	1.374
Help around the home (cooking, cleaning, ironing)	2.90	1.356
Events and fun (birthday and event planning, ladies' night out)	2.87	1.225
Counselling (relationship advice, help with how to deal with		
challenging family situations)	2.54	1.174
Home office help (admin, bookkeeping, personal assistant, parcel		
pick up and drop offs)	2.47	1.319
Small business marketing (social media, market research, content		
creation)	2.41	1.303

Table 2 – Barriers to the Use of the Mobile P2P App

Example Quotes	Concepts (# of Quotes)	Theme (Total # of Quotes)	Aggregate Dimensions
<ul> <li>- My issue with it is just the trust privacy, and I don't see a way around getting a complete stranger to pick your kids up.</li> <li>- I love the idea of it, but I would prefer to use my neighbour.</li> <li>Perhaps a bit more of information about each person.</li> </ul>	<ul> <li>Trustworthy/ Untrustworthy (9)</li> <li>Comfortable/ Uncomfortable (7)</li> <li>Suspicious (1)</li> <li>Information/ Lack of Information (2)</li> </ul>	Trust (19)	
<ul> <li>Security on the app, like inviting someone to clean my house,</li> <li>I find these tasks quite uncomfortable and dangerous being done by a stranger.</li> </ul>	<ul> <li>Secure/ Unsecure (7)</li> <li>Safe/ Dangerous (4)</li> <li>Privacy/ Lack of Privacy (4)</li> <li>Revealing/ Not Revealing (1)</li> </ul>	Security (16)	App/ Technology Related
<ul> <li>I though[t] it would be helpful to connect me to professional services in my area. Instead it was random people offering services with no way of knowing who the[y] are.</li> <li>I think it could add more features for mums to use, an example could be to add more career opportunities for potential or future employment for full-time working mums</li> </ul>	<ul> <li>Relevant/ Irrelevant (10)</li> <li>Services / Lack of Services (15)</li> <li>Novel/ Not new (2)</li> <li>Availability/ Unavailability (4)</li> </ul>	Mismatch in Product-Market Fit (31)	
<ul> <li>There was too much there. It was too busy. I just scrolled through is and found it a busy looking app and it did not make me wanted to go further into the app.</li> <li>I didn't need to use the app because I thought it was time consuming, I didn't have time to sit around and use the app.</li> </ul>	<ul><li>Time/ Lack of Time (6)</li><li>Busy (6)</li></ul>	Time (34)	Non-App/
- I didn't use it because it wasn't of any value to me because my children are older and also not relevant to me or my circumstancesI felt it was more for families with kids in primary school	<ul><li>Age (8)</li><li>Older (14)</li><li>Younger (7)</li></ul>	Age-Related (29)	Non- Technology Related Barriers
<ul> <li>It was not really personal. Prefer to contact face to face. Online there is always a risk.</li> <li>You have to connect with people you have never met. If somehow we could connect by talking first somehow.</li> </ul>	<ul> <li>Personal/ Impersonal (8)</li> <li>Connected/ Unconnected (4)</li> </ul>	Impersonality of the Technology (12)	

Table 3 – Results of PLS-SEM Analysis

Dolotionship	Path	P-Value	Statistical
Relationship	Coefficient		Significance
Sign Up Difficulty → Intention to Re-Use	0.025	0.354	Not Sig.
Usefulness → Intention to Re-Use	0.659	0.000	Sig.
Applicability → Intention to Re-Use	0.192	0.006	Sig.
Performance → Intention to -Re-Use	0.063	0.139	Not Sig.
Intention to Re-Use → WOM	0.227	0.015	Sig.