Innovation Caucus

THE ROAD TO WONDER

A study exploring the barriers and opportunities to creating innovation and enterprise by disabled people

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Cite as: Lawton Smith, H., Winstanley, J., et al. 2023 *The Road to Wonder. A study exploring the barriers and opportunities to creating innovation and enterprise by disabled people.* Oxford, UK: Innovation Caucus.

DOI 10.16995/Road_to_Wonder

Acknowledgements

We thank the participants, the advisory boards, John Slater, Sarah Davison-Poltock and Madeleine Hatfield for their contributions to this project. We are grateful to the project sponsors at Innovate UK for their input into this research. The interpretations and opinions within this report are those of the authors and may not reflect the policy positions of Innovate UK.

About the Innovation Caucus

This is an Innovation Caucus-funded project. The Innovation Caucus supports sustainable innovation-led growth by promoting engagement between the social sciences and the innovation ecosystem. Our members are leading academics from across the social science community, who are engaged in different aspects of innovation research. We connect the social sciences, Innovate UK and the Economic and Social Research Council (ESRC), by providing research insights to inform policy and practice. Professor Tim Vorley (Oxford Brookes University) is the Academic Lead. The initiative is funded and co-developed by the ESRC and Innovate UK, part of UK Research and Innovation (UKRI). The support of the funders is acknowledged. The views expressed in this piece are those of the authors and do not necessarily represent those of the funders.

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FOREWORD

In these challenging times, a positive outcome of upheavals in the economy has been the greater recognition of the societal and economic contributions made to innovation and entrepreneurship by people of different backgrounds. While this new report uncovers the barriers faced by disabled people, it more importantly highlights the impactful and exciting opportunities for innovative entrepreneurship created when disabled people are adequately resourced.

I very much welcome the report, which builds up a growing international portfolio of evidence and policy analysis on these issues. At the Organisation for Economic Co-operation and Development (OECD), our work on inclusive entrepreneurship includes the assessment of policies to support people with disabilities alongside other disadvantaged and under-represented groups in entrepreneurship including women, youth, immigrants, the unemployed and seniors. Our key outputs include an OECD paper on "Supporting persons with disabilities in entrepreneurship", a regular OECD flagship publication series with the European Union on The Missing Entrepreneurs (see OECD 2003b), and an online self-assessment and guidance tool on inclusive entrepreneurship for policy makers – the Better Entrepreneurship Policy Tool.[1]

Nearly one-in-five people in OECD countries have some form of disability and about one-in-seven of those in work are self-employed. This represents a massive pool of entrepreneurs. Many of their businesses have great innovation and growth potential. Governments need to recognise this potential and enable it through better-adapted policies. For example, innovation and entrepreneurship agencies could improve the promotion of their support to disabled groups, promote entrepreneur role models from among people with disabilities, and engage with disability organisations in the co-design of many support schemes.

This report unpacks the potential of innovation and entrepreneurship by people with disabilities. It sets out the opportunity for UK and international policy makers to meet their objectives by better engaging people with disabilities.

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[1] https://betterentrepreneurship.eu/en/home (accessed March 27 2024)

EXECUTIVE SUMMARY

Introduction

Improving the environment for innovation is a societal challenge. This study stems from a recognition of the current barriers to innovation and entrepreneurship by disabled people, as well as the benefits of finding ways to overcome them. This requires establishing who the disabled innovators are, the different kinds of contexts in which they work, the challenges that they face and the contribution that they make to innovation and entrepreneurial ecosystems. The study adopts Innovate UK's definition of business innovation which is, "the commercially successful application of ideas. It leads to new or improved products, processes, services and business models based on new ideas and technologies."[2]

This report provides a synthesis of the evidence generated by the study. It draws on other relevant UK and international studies. The findings reveal significant new data about the lived experience of disabled people and the complex interactions between policy intent and practice.

Research design

This study was conducted between October 2022 and April 2023. It comprised four elements:

1. A review of previous research, academic and grey literature.
2. Secondary analysis of the Labour Force Survey on self-employment and disability.
3. Inclusive entrepreneurship survey, which received 1,300 starts and 435 full completions covering all regions and nations of the UK. Analysis in this report is based on the 262 people who responded that they were entrepreneurs or that they had an established business.
4. Focus groups and interviews with self-identifying disabled innovators to gather qualitative data to supplement the survey data.

This report presents the initial findings from this research.

This study built on previous research to ask:

1. Who are disabled entrepreneurs, what do they do, why do they do this, why now and where are they?
2. What are the challenges and opportunities facing disabled entrepreneurs in their pursuit of innovation?

Summary of key findings

This study breaks new ground by identifying the specifics of innovation activities and opportunities for developing more inclusive entrepreneurial ecosystems, at regional and national levels. The findings present a largely optimistic picture of enterprise and innovation

[2] https://www.ukri.org/wp-content/uploads/2021/11/IUK-18112021-Plan-For-Action-for-UK-Business-Innovation_FULL_WEB-FINAL-26.10.21-1.pdf (accessed March 27 2024)

by disabled people when they are appropriately resourced. However, significant investment alongside ethical, inter-agency collaboration led by disabled entrepreneurs/innovators is required to remove barriers.

Our conclusions and related policy recommendations fall into six categories.

1. The importance of well-designed government initiatives

A key message throughout the study is the success and importance of policies such as the UK's Access to Work (AtW) award in underpinning inclusive innovation and entrepreneurship. The inclusive entrepreneurship survey showed a significant relationship between gaining an AtW award and innovation activities. This finding has wider implications as it highlights the need for a better understanding of spillover effects between different policy domains. However, this research showed that weaknesses in policy design can limit their success, particularly when it comes to awareness of the award (see also conclusion 6) and the application process.

Recommendations

1. **Collaboration** between organisations within the disabled entrepreneur sector. This an area of policy analysis that deserves action between government departments. For example, in the UK, Innovate UK should engage more with the Department for Work and Pensions (DWP) to identify how the AtW award can better support Innovate UK programmes. The spillover effects of co-existing government policies should be further researched.
2. Agencies which **work with applicants** who just failed to meet the threshold for an award. This could apply to anyone who requested reasonable adjustments at application rather than only those who have just failed to meet the funding criteria. This would create policies that are more inclusive and supportive across the community. Applicants who just fail to get funding could be eligible for a proof-of-concept stage that would be a platform for a reapplication. There is also a need for rolling programmes so that natural breaks can occur to allow individuals to navigate their conditions.
3. Draw on **international best practices**. The grey and the academic literature presented in this report offer examples from the UK, USA, Canada and the EU. For example, support might include a disability specific incubator/accelerator both virtual and physical such as the kind that exists in Australia (funded by the state of Victoria) and Europe (the EU-funded LIAISE project). This could incorporate inclusive business support and grants for innovative start-ups and scale-ups, as well as a health and wellbeing strand of support.
4. **Evaluation** is needed to demonstrate impacts, justify spending and improve policy by learning from experience. There is a need to build a stronger evidence base by focusing on disabled innovators in the full evaluations of programmes. A useful toolkit for policy evaluation is provided by the OECD (2023a) in its report "Policy Brief on Entrepreneurship for People with Disabilities", which sets out typical indicators for inclusive entrepreneurship policy evaluation.

2. The role of regional factors

The LFS and inclusive entrepreneurship survey conducted as part of this research show strong regional patterns of both self-employment and innovation, which should be reflected in national/global innovation ecosystems. Some regions have much higher rates of self-employment than others. The inclusive entrepreneurship survey variables that show statistically significant variations by region are innovation scope, time restrictions (the respondent feels subject to constraints on their time arising from disability affecting their capacity to work and earn), export activities, network membership and receipt of AtW awards.

For example, the data show that London has more innovations that are new to sector/market whereas other parts of the country do less well. The South East and the East of England outperform other regions in introducing innovations that are new to the world.

Recommendations

1. **Strategies to address disparities** such as networking levels and levels of bidding for government programmes in part by ensuring wider adoption of existing good practices. This involves building capacity at the regional level and identifying best practices in particular regions so that this can feed into a national strategy. Public policy leadership building should include working with established bespoke networks, preferably those led by disabled entrepreneurs, in different parts of the country to connect them more closely to leaders within innovation ecosystems and avoid further discrimination in the process.
2. Further **analysis** is needed to find explanations for these patterns and their outcomes. Regional differences such as those found in this study are likely to exist in other countries.

3. The need for a cultural shift

The economic and social value of disabled innovative entrepreneurship lies in direct financial outcomes through turnover and generating employment as well as the creation of new products, services and industries. Further, disabled entrepreneurs contribute to innovation by bringing new perspectives and products, including those aimed at disabled and elderly consumers. A cultural shift is needed to recognise the economic and social value of innovation and enterprise by disabled people.

This report provides new statistical evidence on the nature of innovation in the kinds of products and services disabled innovators produce. For example, software/web services are more likely to be described as innovative than other sectors, particularly consultancy activities. Hospitality entrepreneurs are likely to produce innovations that are new to the sector/market. Businesses offering brokering services are most likely to produce innovations that are new to the world. Manufacturing is more likely to be new to the market/sector than to the world. Consultancy service businesses are most likely to "export" whereas software/web services are the least likely.

Recommendations

1. Improve understanding of the **nature of innovation** by disabled entrepreneurs to design and deliver better policy measures.

2. Build **visibility and awareness** of the economic and social contributions of disabled innovators to strengthen innovation ecosystems from within.

4. The positive impact on health and wellbeing

The positive effect of innovation and entrepreneurship on health and wellbeing is often overlooked. The inclusive entrepreneurship survey evidence highlights that creating innovation/enterprise positively impacts some entrepreneurs' socio-economic status leading to less reliance on welfare benefits as their businesses grow. This conclusion is based on turnover above benefit level, which can have positive impacts on health and wellbeing for some, for example reducing reliance on anti-depressants/opioids.

Recommendations

1. Government departments should **collaborate to recognise the synergies** that exist in reducing health inequalities within this sector.
2. The **knock-on effects** on individuals' health and wellbeing need to be considered when outcomes of entrepreneurship and innovation funding programmes are assessed.

5. Recognising that intersectional discrimination limits innovation

Discrimination affects the innovation process because of the additional obstacles it presents, such as being unable to raise finance and the lack of bespoke support from mentors and business advisors. While this has been shown to affect all categories of disabled people, it is particularly pronounced for disabled women. In turn, discrimination has an impact on the propensity of candidates to apply for finance and/or innovation awards such as those awarded by Innovate UK. The impact of intersectionality discrimination should not be underestimated as the impacts can be acute.

Recommendations

1. Implement **disaggregated data** collection across departments to predict and achieve the inclusive and sustainable resourcing of this sector, maximising its socio-economic benefits.
2. Ensure **accessibility** of awards. Government agencies should not only collect data on applicants to programmes but also address discrimination towards individuals at the pre-application stage. Decision-making panels and programmes should reflect openness. The post-award process should also be considered so that effective support is in place to maximise the gains from the award.

6. Promoting awareness and ethical collaboration

The inclusive entrepreneurship survey and focus groups both identified that there was a lack of awareness among current and aspiring disabled innovators about opportunities offered by

government programmes. The grey literature review highlighted that while many disabled innovators are engaged in the design process, they could be more widely engaged in leading on innovation and in the co-design of government policies directed at supporting innovation.

In addition, the grey literature review revealed widespread interest among UK business and policy communities, which have made recommendations for best practices. Examples include the Department of Work and Pensions (2019), the Federation of Small Business (2022), IPSE (2019), Lloyds Bank (2023), the Lending Standards Board (2021) and OECD (2023a).

The focus groups helped identify existing organisations and networks supporting disabled entrepreneurs/innovators, operating internationally, nationally, regionally or all of these. These include South of Scotland Enterprise, The Mind Tribe, The Inclusive Entrepreneur Network and Disability Wales. Providing opportunities for these organisations to better engage with policy-makers would enhance and augment what they already provide.

This suggests that there is scope for greater collaboration between different organisations and the government to address both the awareness and delivery of resources.

Recommendations

1. Appoint a **neutral government body** to undertake ethical collaboration with disabled people and other key players in the design of policies and programmes to address the barriers identified in the report, building on best practices and evaluation in the UK and internationally.
2. Develop both more local **awareness** of government policy as well as national campaigns in conjunction with existing innovative disabled entrepreneurs and other organisations.
3. Informal **support or mentoring** by other disabled entrepreneurs could be a crucial part of the entrepreneurship and innovation process by strengthening innovation capacity. This could be facilitated by discussion forums (sandpits) that promote individuals' engagement and collaboration with other disabled innovators (and aspiring disabled innovators). Identifying training and development opportunities which effectively resource the needs of both is required.

INTRODUCING INNOVATION AND ENTERPRISE BY DISABLED PEOPLE

Improving the environment for innovation is a societal challenge. This study stems from a recognition of the current barriers to innovation and entrepreneurship by disabled people, as well as the benefits of finding ways to overcome them. This requires establishing who the disabled innovators are, the different kinds of contexts in which they work, the challenges that they face and the contribution that they make to innovation and entrepreneurial ecosystems. The study adopts Innovate UK's definition of business innovation which is, "the commercially successful application of ideas. It leads to new or improved products, processes, services, and business models based on new ideas and technologies."[3]

This report provides a synthesis of the evidence generated by the study. It draws on other relevant UK and international studies. The findings reveal significant new data about the lived experience of disabled people and the complex interactions between policy intent and practice.

Terminology

This field is beset by vexed terminology. Disability is a broad international umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual's health condition(s) and their contextual factors (environmental and personal) (see the International Classification of Functioning, Disability and Health (ICF) and in the UK the definition under the Equality Act 2010).[4,5] Contextual factors refer to societal responses, which create environmental barriers to such people participating in social life (Oliver, 1990; Renko et al., 2016).

Definitions of disability, and the associated policy approaches, are shaped by two contrasting conceptions: the medical model and the social model. The medical model treats disability as a characteristic of the person. The social model of disability, pioneered by Oliver (1990), assumes that people are disabled by societal attitudes, institutions and environmental barriers. The social model distinguishes "impairment" – limitation of the mind and body – from "disability" – social exclusion (Shakespeare, 2006). These distinctions are important because they may influence who is defined as disabled in particular places, with implications for eligibility for support in the publicly funded active labour market and entrepreneurship programmes (Kitching, 2014). In this study, the authors have used terminology consistent with the social model of disability.

The importance of intersectionality is recognised in this study. Intersectionality refers to the multiple and overlapping nature of social identities and social categories such as age, gender, ethnicity, sexuality and class. It follows that addressing the challenges and opportunities faced by disabled innovators as a single category may fail to recognise the complexity of multiple

[3] IUK-18112021-Plan-For-Action-for-UK-Business-Innovation_FULL_WEB-FINAL-26.10.21-1.pdf (ukri.org)

[4] PT6 Working paper (cdc.gov) (accessed March 27 2024

[5] Definition of disability under the Equality Act 2010 - GOV.UK (www.gov.uk) (accessed March 27 2024

systems of disadvantage and/or discrimination (Marlow and Martinex Dy, 2018, cited in Vorley et al., 2019).

This report uses the terms "innovator", "entrepreneur" and "self-employed" interchangeably to avoid putting subjects into boxes or creating theoretical barriers to how disabled people can contribute to their economies and societies. Cantillon (1755) is credited with the first recorded use of the term "entrepreneur", noting the "willingness to bear the personal and financial risk of a business venture as the defining characteristic of an entrepreneur". These characteristics also define innovators and the self-employed.

Disability, innovation and entrepreneurship in focus

> *Disabled people are a vital and growing section of the self-employed community. In fact, the number of disabled people in self-employment has risen by 30 per cent in the last five years alone. Disabled people now make up 14 per cent of the total self-employed workforce, and this extraordinary growth shows no signs of slowing (Ipse, 2019, p.26).*

It is increasingly recognised that disabled people "make significant contributions to their national economies and to society as productive employees, self-employed workers and entrepreneurs in various sectors" (European Bank of Reconstruction and Development, (EBRD), 2020, p. 3). Innovation by disabled people is also highlighted by Daehn and Croxon (2021, p. 1) who argued that, "diversity drives innovation" and that "individuals with disabilities are strong and innovative contributors to society".

Internationally, the importance of ensuring that disabled people can participate fully in social and economic spheres has been emphasised by the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and the United Nations Sustainable Development Goals (SDGs).

However, evidence suggests that there are structural barriers to innovation that reduce opportunities or discourage disabled people from entering an innovation system, and then hinder their participation once an opportunity has been identified.

Disabled innovators: opportunities

Previous studies have highlighted the necessity of involving more disabled people in innovation. Disabled people's experiences might act as a stimulus for innovation; disabled innovators might better understand disabled people's needs; and a rapidly growing and diversifying market needs innovators who understand it.

Stimulus for innovation

The involvement of disabled people may create a stronger model of user design because disabled people are often outstanding problem solvers due to the many challenges they face, and innovative ideas are likely to come from those with new or different angles on old problems (Goggin, 2008). Disabled lead users are a valuable source for innovation in new product development because they are capable of detecting and experiencing earlier than the general market, and they are also driven to innovate by being able to gain significant benefits if their needs are fulfilled (Conradie et al., 2014).

Understanding disabled people's needs

Inclusive design principles mean that disabled people should be effectively resourced to become innovators and business owners in their own right rather than as the recipients of products (such as prosthetics) developed for them (Winstanley, 2017)[6]. This would avoid innovation failures such as the Australian "bionic ear" (cochlear implant), which was flawed because the design was not informed by disabled users (Goggin, 2008). Hence there is a need for consultation and engagement with disabled people to ensure leadership roles within the creation and production of innovation and enterprise. The OECD (2023a) similarly highlights opportunities for innovation for disabled entrepreneurs through technological advances. This is in assistive technologies but relevant here too is that technological innovations could improve an individual's capability to adapt to their respective disability and to reach markets.

Rapidly growing and diversifying market

Potential spillover benefits from disabled innovators have been identified (Coogan, 2019). Innovations for the disabled market may also benefit wider populations (e.g., ageing populations) and universal design/accessibility. In addition, their role as an 'outsider' group means that disabled people may have particular insights into incremental innovation regarding 'mainstream' products. More people with disabilities should be included in the workforce as integral members of design-testing and decision-making teams because many everyday products have evolved from technology developed by or for disabled people (Jeetah, 2022). Other products are later enhanced to be used by disabled people. Organisations and innovators engaged in responsible research and innovation (RRI) must consider how stakeholders communicate, provide multiple avenues for participation and create an environment that values and cultivates diverse perspectives and communication (Monteleone, 2020).

Disabled innovators: profile

Disabled people are a heterogeneous group but Labour Force Survey (LFS) survey data for 2022 identified patterns about self-employment:

- Disabled people are slightly more likely to be self-employed (12.5%) than non-disabled people (11.9%).
- Females who are disabled are more likely to be entrepreneurs (22.8%) than their male counterparts (18.8%).
- The likelihood of being in self-employment increases with age for disabled and non-disabled workers.
- Similar to non-disabled self-employed people, 62% of disabled entrepreneurs have been self-employed for over 5 years. A slightly greater proportion of disabled entrepreneurs has been self-employed for fewer than two years (21%) compared with non-disabled entrepreneurs (16%).

[6] https://www.universalinclusion.co.uk/images/UN_presentation_December_2017.pdf (accessed August 14 2023)

- The spread of earnings from self-employment compared to that from employment varies considerably. Some self-employed non-disabled workers are making more money on average than employees whereas others tend to make less money than their employed counterparts.
- Self-employed disabled people are more likely than disabled employees to indicate that their health limits their activity "a lot".
- Self-employed disabled males are significantly more likely (43.5%) than their female counterparts (35%) to indicate their health doesn't limit their activity "at all".
- Intersectionality factors into self-employment affecting some societal groups more than others. For example, disabled entrepreneurs from ethnic minority backgrounds are over three times more likely than white disabled entrepreneurs to indicate that diabetes is their main health condition.

RESEARCH DESIGN

The study was designed and conducted in four phases following consultations with four advisory boards (the Research Team, International Policy Board, Advisory Board Working Groups and the Networks for Survey Team – see separate list). The data from the phases were assembled and triangulated to produce the analysis, which includes four key elements:

1. Literature review: a review of both the grey literature (Appendix A) and academic research (Appendix B) on disability and entrepreneurship. This captured currently available evidence on business innovation and entrepreneurship by disabled people. Both sets of literature have strong international foci.
2. Inclusive entrepreneurship survey (Appendix C): formatted and analysed by the Innovation Caucus team. This was circulated through networks that support disabled entrepreneurs and innovators, individuals through their networks and online recruitment. It was distributed between 1 October 2022 and 17 April 2023. 1,300 respondents started the survey, with 435 full completions covering all regions and nations. In this report, most data are based on the 262 people who completed the survey and responded that they were entrepreneurs (i.e., that they had established a business).
3. Focus groups and interviews: four in-depth focus groups and two interviews gathered qualitative data to supplement the inclusive entrepreneurship survey. Thirty-two owners of businesses that offered either generic or disability-focused products or services participated in one of three face-to-face focus groups or online interviews. Two individuals were interviewed online rather than in person because of time and travel constraints. Data were analysed inductively and deductively using thematic analysis. Quotations are presented in this summary to contextualise the report findings.
4. Labour Force Survey (LFS) data (Appendix D): analysis of data on disabled entrepreneurs in the UK (microdata Q4 2022, October to December). Some of the data were compared with results from other elements in the study.

KEY FINDINGS

The findings fall into five main areas. These provide the basis for questioning current policy practices.

1. Who disabled innovators are, as indicated by gender, ethnicity and age. a
2. Regional differences in activity.
3. The nature of the entrepreneurial and innovation activities undertaken by disabled entrepreneurs.
4. The identification of social outcomes of innovation including health and wellbeing.
5. The inter-relationship between policies and practice in different areas of government.

The inclusive entrepreneurship survey

1. Who disabled innovators are: intersectionality, age, gender and ethnicity

The profile of the respondents and their intersectionality are indicated by the demographic data. The most frequent age group was 25-34 years followed by 35-49 years, revealing that younger disabled respondents are more active in entrepreneurial activities. The gender profile was fairly evenly balanced with only slightly more males than females. The most common ethnicity was English, Welsh, Scottish, Northern Irish, British, Irish or other white background (66% - N.B. percentages are rounded). The other third of respondents included those of Arab, Caribbean, African, Asian, mixed race or multiple ethnic backgrounds with no one group dominating.

The women in the sample tend to be older than the men. The data also show strong gender differences in patterns of entrepreneurship and innovation. The LFS survey data suggest that women who are disabled are more likely to be entrepreneurs than their male counterparts. However, this finding was not supported by the survey on inclusive entrepreneurship conducted as part of this research.

The most significant gender differences from our survey were that firms owned by men had a higher turnover than firms owned by women (for example, 18% of men-owned businesses had a turnover of over £100k compared with 11% of women), with a greater tendency to have other staff (92% for men, 87% for women). The men were much more likely to be motivated by a wish to be their own boss and women were significantly more likely to stress social motivations for becoming entrepreneurs. For instance, three times as many men as women cited a motivation to be their own boss and nearly twice as many women as men cited making a difference in the world/community. Men are more likely to be involved in retail and software/web services, especially software/web services. Women are more likely to be involved in wholesale and consultancy. Men are half as likely as women to have an Access to Work (AtW) award.

Age influences if respondents self-identify as entrepreneurs rather than innovators as well as the kinds of businesses they operate. Middle-aged people (aged 35-49 years) are less likely to describe themselves as innovators than younger people, especially those aged 25-34 years. Older and middle-aged people find managing the AtW award processes easier. Manufacturing attracts the youngest population, even compared to software/web services. Unsurprisingly, brokering and consultancy services are more likely to involve older populations.

2. Regional differences in activities

The LFS and new inclusive entrepreneurship survey data support a previous study (Lawton Smith and Mansour, 2022) in showing strong regional patterns of both self-employment and innovation. LFS data shows that the East Midlands (25%) and the North East (NE) (24%) are the English regions with the highest proportion of self-employed disabled people. The proportion of self-employed disabled workers in the UK overall is highest in Wales (26%). The average across all regions is 13%.

The inclusive entrepreneurship survey variables that show statistically significant variations by region are innovation scope, time restrictions (the respondent feels subject to constraints on their time arising from disability affecting their capacity to work and earn), export activities, network membership and AtW awards.

The data show that London has the highest response rate for innovations that are new to the market while the North East has by far the lowest. The South East (SE) (32%) and the East (28%) outperform other regions in introducing innovations that are new to the world. The NW does this very poorly (3%). Further research is needed to explore this pattern.

The entrepreneurs who feel most time restricted are in the NE (56%), Scotland (43%), SE (44%) and Wales (52%). Therefore, entrepreneurs in these geographical locations are under greater pressure in their work environment. London is an outlier in that time restrictions are rarely reported to be a factor (11%).

The SE (54%) and Wales (57%) have the highest percentage of companies with international markets (exports) (average 32%).

On networking membership, the NW stands out as being well networked but the West Midlands (WM), SE, NE, Scotland and London have relatively poorly connected communities.

3. The nature of innovation: activities, type and scope

This study breaks new ground by identifying the specifics of innovation. This is almost completely missing in the academic literature while the grey literature tends to discuss innovation partnerships in the context of individual experiences. Please see Appendix A for a review of the grey literature and Appendix B for the systematic review of the academic literature.

The inclusive entrepreneurship survey data based on 262 answers about the specifics of **innovation activities** show that larger businesses (those with more staff or higher turnover) are significantly more likely to innovate. For example, those with other personnel have a 93% probability of innovation, whereas those without have a 57% probability of innovation. Innovation is not linked to place of work or time constraints. Innovation is less likely for "necessity" entrepreneurs and more likely for those whose motivation is making a difference in the world or sustainable personal development.

Responses about **innovation type** (based on 372 answers) showed differences between innovation in service sectors and manufacturing (products). For example, new products were less likely to be innovative for the sector/market than new services or new technology (even when they were new to a firm). Development firms (concepts and otherwise) have lower turnover.

Regarding **innovation scope** (based on 220 survey responses), being part of a network correlates with having an innovation that is broader in scope and thus more applicable.

The nature of **products and services** is where the strongest patterns of difference emerge. It matters what sort of product or service is involved. For example, software/web services are more likely to claim to be innovative than other sectors (98% compared to an overall average of 84%). By contrast, consultancy is well below average (66%). Hospitality entrepreneurs are likely to produce innovations that are new to the sector/market. Businesses offering brokering services are most likely to produce innovations that are new to the world. Products are more likely to be new to the market or sector rather than to the world. Consultancy service businesses are most likely to "export" (49%) whereas brokering (19%), wholesale physical items (35%) and software/web services (38%) are least likely.

There are also differences in response to the DWP AtW Programme. Applicants making products have the least difficulty in obtaining an award. Brokering proposals have more problems in accessing AtW but, when funded, then say that AtW is exceptionally good at providing everything required (100%). Consultancy firms had the lowest satisfaction rate.

4. Social outcomes including health and wellbeing

The survey data show that overall, social impacts are independent of age, gender and region. There are few statistically significant correlations. However, networking was viewed as especially important in increasing skills and knowledge and in developing innovative products and services. It was also considered positive for all social aspects, particularly health and wellbeing.

Key findings from the focus groups related to the (negative) impact on innovation when welfare restrictions limited hours worked/money earned. For some, financial difficulties and accessing support created health problems and restricted growth.

Some participants reported that creating innovation/enterprise had positively impacted their socio-economic status with less reliance on welfare benefits as their business grew. This conclusion is based on turnover above benefit level and can have positive impacts on health and wellbeing for some, for example reducing reliance on anti-depressants/opioids.

5. The policy-making process

The literature reviews demonstrate that the voices of disabled people, either singly or through organisations, need to be actively involved when policies or programmes are designed. This is necessary to increase the number of innovative and creative entrepreneurs, to reduce the disability pay and employment gap as well as health inequalities for innovative disabled entrepreneurs.

The focus groups and inclusive entrepreneurship survey highlighted differences between applying for and managing an AtW award. The focus groups emphasised the difficulty of applying for the award and a lack of awareness of it, but successful applicants felt the benefits to be substantial. Respondents particularly emphasised the unintended positive socio-economic impact of an AtW award, for example in the provision of support workers, aids and adaptations, training etc.

The survey showed that there are strong regional effects. London has a low level of AtW award applications (20%) but the NW has a relatively high level (90%). More attention to regional support is therefore needed.

AtW was strongly associated with innovation activity. Tech firms are much more likely to claim that AtW helped with business thinking while development firms are least likely. Those entrepreneurs introducing new services or processes and tech firms found applying for AtW easier than those undertaking other activities. All found it helpful in managing their presenting symptoms but the value varied depending on the kinds of innovation. It was significantly more helpful for the introduction of new products, new processes and tech innovations than for new services or development. Managing AtW seems to be more straight forward for those innovators with a new to market/sector product or service rather than either broader (global) or narrower (firm only) innovations. Projects with a social impact increasing knowledge and skills were more likely to claim that they had developed clearer business thinking and improved their management of an AtW award.

The focus groups[7]

The purpose of the focus groups and the interviews with individuals was to gather views and experiences of opportunities, barriers, challenges and support needs to enable disabled entrepreneurs to participate in inclusive innovative entrepreneurship. Participants were asked to share their experiences of establishing a business including the challenges posed in doing so, the impact of entrepreneurship on their health and wellbeing and their economic contribution to society.

Business types

Participants owned businesses that offered either generic or disability-focused products or services. Generic services included virtual personal assistant services, software development, marketing, communications, PR and media, environmental engineering and manufacturing. "Disability-focused" services and products included developing mobility aids, advising businesses on making services accessible to disabled people, inclusive travel services, provision of assistance technology, clothing for disabled people (adaptive fashion) and tech services to support neurodiverse people.

Motivations for creating innovation and enterprise

Academic literature refers to "push" and "pull" factors for undertaking entrepreneurship. Some individuals are 'pushed' to work for themselves due to negative experiences in employment, for example, due to inflexible workplaces, lack of reasonable adjustments or difficulty finding work. Others may decide to become self-employed due to the "pull" of having greater flexibility and autonomy when working for themselves. However, in practice, motivations for self-employment and entrepreneurship are often complex.

In the focus groups and interviews, several "push" factors were discussed. Some participants referred to having been made redundant or having their employment terminated due to their

[7] Conducted by Paula Holland, Lancaster University

impairment. For example, one participant spoke of difficulties securing a job because employers were deterred from employing him as a disabled person because of 'health and safety' concerns. Another had been fired from his job due to pain in his hands; this experience deterred him from informing subsequent employers about more recent diagnoses of autism, anxiety and depression:

> *I tend not to let people know or employers know that I do have a disability so now I'm running my own company in software development and I find that oftentimes when you let employers know supposedly they try to make adjustments or improvements for you, but they start looking at you differently. They try to find a way to either get rid of you or kind of treat you in particular way…differently than other employees. I often find adjustments that you request were not provided, they either refuse or otherwise kind of explain away.*

Another participant felt compelled to leave his job due to a lack of reasonable adjustments and inflexible work patterns. Travelling long distances daily to meetings had become increasingly difficult for him; this resulted in his colleagues excluding him from social meetings in the pub, so he felt pressured to leave. Other participants said that gaps in their employment history, for example, due to surgery or pain, deterred employers.

"Pull" factors included having the ability to work flexibly. Some participants spoke of how working for themself and/or working from home made it easier to manage their presenting symptoms, for example, in terms of saving energy and being able to lie down if needed. As one participant explained:

> *…the pandemic really helped because now more companies are open to have you work from home, and because I also have chronic pain it really makes a difference because if, like, I work from home, it costs me less energy. And if I have a bad day, I can still like my brain still works. So you can lie down with your legs up, ice pack on. But you can still work with your laptop.*

Other participants took advantage of increased remote working during the pandemic to set up their business, for example, by working from home to provide remote working administrative support to other businesses.

Another pull factor is the desire to develop innovative solutions to difficulties experienced as a disabled person:

> *Disabled people often develop businesses] in response to something experienced, something that's missing, something that we want to change or make better.*
>
> *My experience of disability entrepreneurship is usually people solving problems because of either access or societal challenges that they end up getting so frustrated about that they try and, you know, fix something for themselves, then they turn it into a business because they know that there's other people who will be in a similar circumstance, you know, so whether that's wheelchair companies, whether that's you have a friend who has specialized wheelchair luggage, he's also kind of created a couple of different types of wheelchair.*

Having felt pressured to leave his job, one participant drew on his experience as a wheelchair user and developed wheelchair adaptions:

> *It's the biggest problem with all mobility aids for disabled people. They sit you down, so you're basically invisible and you can't interact with people like a normal person. […] what we've done is raise the person up so you're at eye level but then you can drop it down to get on and off it.*

Difficulties securing finance

One of the major barriers to entrepreneurship reported by participants is difficulties securing finance to establish, maintain and grow their business. Most participants referred to difficulty accessing bank loans when starting up or seeking to expand their business. A common perception was that lenders perceived disabled people as a "liability" or risky:

> *Innovation is risky anyway, when you're disabled and innovative, it's a double bind.*

> *Some of the barriers I have faced going forward is that I've wanted to expand my business for quite a while now. And the barriers, I've found, is going to lenders. As soon as they know you're disabled, it seems to shut a door. We've heard this over and over and over again so many times. I have ideas…about designs or new items that will help people with disabilities that aren't out there at the moment…but again, you need funding for all this, and it can't happen without that funding. And to get funding is a nightmare really.*

Women in the focus groups frequently discussed how being a disabled woman seemed to pose an even greater risk. Participants with non-visible impairments also spoke of the difficulties this posed when trying to secure funding. One woman with an invisible impairment discussed how the lack of reasonable adjustments and others' negative attitudes that she encountered when trying to secure finance threatened her ability to provide for her family:

> *I'm currently in the process of founding a new business start-up. I'm putting together an investment deck at the moment and this won't be a small amount of investment it will be hundreds of thousands of pounds worth in the long-term for founding this new business. So, I think the barriers that are faced, it's the intersectionality thing, being a female founder, being taken seriously as a female founder. Access to funding is a challenge at the best of times for entrepreneurs, but when you are disabled, female and have long-term health conditions as well and caring responsibilities, it makes that even harder.*

The risk of not being funded makes it difficult to decide whether to be honest with banks or investors. One participant said she wanted to tell them she was disabled because she wanted to work with inclusive funders, but this was at the risk of deterring them from investing. Another participant chose whether or not to 'look' disabled when pitching to an investor:

> *One of the biggest [challenges] is whether I use my stick, [to appear] disabled or not. It's been a conscious decision in some rooms to not have a stick because if I do, there's an immediate switch off if I use the word 'disabled'. Non-disabled people will switch off and even pitching for investors as a woman has been a problem.*

Lacking a regular or permanent income due to an interrupted employment history, or the move from employment to self-employment, is a barrier to applying for bank loans, grants and other funding. The credit score of disabled entrepreneurs may not meet traditional funding requirements in the same way as that of someone who has a more consistent income

or credit history. Banks and other lenders need to be more aware of the reality of living with a disability.

A neurodiverse participant spoke of how this difficulty was compounded by the need to complete complex grant application forms:

> *Had I applied for business loans at the beginning of lockdown, I would have been fine because I had a demonstrable history of payments. But because over three years I became self-employed…I then have no income and obviously no bank is going to loan me money. We can't rely on income…which means that accessing any kind of loan is difficult and it becomes, it has to be a grant. But then grant applications take weeks, months, years out of your life and it's not accessible to everybody, right? I'm diagnosed ADHD and my executive dysfunction…it's really difficult for me to apply... Lots of other people apply to grants and they're so time consuming.*

In the absence of funding, several participants relied on their own capital or funding from parents or family to get started. Others had worked for free when starting out so they could establish partnerships and a good reputation; however, this had a negative impact on credit history:

> *Finding funding to support me has been completely treacherous because saying that you are a disability awareness consultant but you've been working for six years completely free because people love to pay you nothing and then they say, OK, where's your bank statements?… But I don't have anything to show, I can give you testimonials [but] I can't give you any recent income I've had, so they won't give you a bank loan.*

Ironically, lack of capital made some participants ineligible for some types of funding. One participant spoke of being limited to applying for the small number of grants that do not require matched funding:

> *Because I live on disability benefits, I've spent all my great wealth that I accumulated when I was a high-flying marketing manager, that's all gone now. 'Cause life gets expensive when you're disabled so we can't apply for any grants that have a big matched funding criterion. That kinds of excludes us. So we can only go for these and they're quite rare; two a year will turn up. So if we don't get them…it destroys you.*

This participant recommended that applicants with a good product but who lack a strong application should be coached and given detailed feedback to improve it and secure the grant:

> *…because our product helps many millions of people, so it's not just us who suffer, it's all those people who would benefit and the UK economy, how much we're gonna bring in.*

One respondent referred to regional inequalities in access to funding and business support. Referring to his home county as a "desert" lacking business support and training opportunities, he had considered setting up "an office in a different county just to get a bit more support for building our business".

Solutions that participants suggested to make it easier to secure funding included lenders and investors offering bespoke financing for disabled entrepreneurs, for which applicants would be allowed to include costs for their support needs, and which have more inclusive

application forms. A general difficulty in applying for grants is form filling. For example, an applicant to chose not to apply for an Innovate UK Women in Innovation Award, although this does include a video, in favour of an Inclusion Award, which was "more user-friendly to apply for":

> *…that were more either like visual recording or just the ability to upload, you know, pictures and diagrams…Some of the ones that we found a lot easier [were] ones where you can upload videos. So, for the Women Innovator, part of Innovate UK, did have a video section so you could talk to the camera and you didn't have to type things or think about things…any opportunity to not type is amazing.*

Innovate UK acknowledge that there are still accessibility issues, but these are being addressed. Another gap raised by participants is the need to work with applicants who had applied for Innovate UK awards but missed the threshold by a small margin. A subsequent step would be to independently review those applications and then work with the applicants to help them get to the next level of achieving the grant. This would mean that the process of funding the development of products and services that might have a significant benefit to millions of disabled people could be more efficient and less wasteful in time and resources.

Difficulties navigating Access to Work (AtW)

AtW is an internationally unrivalled discretionary award with pure intent in respect of meeting government obligations in line with the Equality Act 2010, the UNCRPD and the UN (SDGs). It has the potential to bring about real and sustainable reductions in disability employment and pay gaps, and increase the socio-economic status of this sector. It is game changing for successful applicants.

However, a common theme throughout this study was a conflict between the intent of AtW and its administration. This included the eligibility criteria, which could see disabled people deemed ineligible if they exceeded the Lower Earnings Level both at the stage of application and/or renewal, rendering the individual unable to reapply for five years. Applicants also face welfare restrictions, which limit the number of hours they can work on their business and the amount of money they can take. When establishing business viability advisors appear to discount the rationale that led to the award being created in the first place, with applicants being measured against their non-disabled peers in terms of how they create conduct and operate their businesses. This conflict risks restricting business growth and opportunities to grow the economy.

Previous studies have highlighted low awareness of AtW, both among disabled people and employers. Some of our study participants reported having not known about the service. Most participants spoke of difficulties applying for funding from AtW. One participant described the process as overly intrusive and involving personal questions, including the frequency of going to the toilet. Others reported that the need to repeatedly recount difficulties or personal history is re-traumatising. The service was also described as slow in responding to applications:

> *Access to Work is really, is hidden under the carpet quite often and then when you do become aware you're unsure what you can get, where you have to go for it or who's included, you*

> *know, and then it takes forever and a day to come through and if you're given a job on Friday that you're starting the week on Monday and it's going to take six months for your Access to Work to come through, then what do you do?*

Some participants described how difficulties applying for and securing funding from the service had negative repercussions for their health and wellbeing. One participant described how the application form and lack of understanding from some of the Access to Work staff caused her a lot of stress:

> *[It] was bringing me close to meltdown. Just processing the stuff, I have to have somebody to help me to fill out forms and I have 19 staff and all of their clients and their clients as well. All are neurodivergent and they're all coming to me with their meltdowns over the forms and I have to try and literally, I think it's a public health crisis that we have with Access to Work. I really do think it's a public health crisis because of the amount of sickness that it's creating in people. So this one lady [from Access to Work] said to me, 'well, if I were you love, I'd just be grateful you've got the money'. And I was like, 'is this being recorded? Because I hope so'.*

A participant who identified herself as blind was accompanied by her husband who also spoke about the stress associated with navigating the AtW.

> *It's the amount of hoops that I've had to jump through. And I, on a very, very personal level I feel like they're passing the buck. So even though I am now in the [AtW] system, a massive effort to get through in the first place, they keep stopping the money. So again, as you said [name], it's a public health crisis because it's costly and causes severe anxiety and depression and made me feel like not just a second class, it's like a 75th class because it's like I'm not important enough to either be supported in the thing that the government are literally saying will give you support.*

This participant's husband also spoke of the strain he felt watching her struggle to secure AtW funding, describing the application process as "horrible". He said,

> *they just seem to go out of their way to make it impossible for you to actually get the money… Not only does it take a long time but they want specific buzzwords that you* have to use to *fulfil the requirements…*

He went on to describe how one of the Access to Work advisors had compared their salary to what his wife was requesting in terms of support.

> *[They said] 'I only get paid a fraction amount more than you're getting for doing nothing'. And that's what it is. It's jealousy…It's not sympathetic. I've read emails from [wife's] point of view and heard their phone conversations and it's like they're accusing you of just trying to do everything possible to get money…It's horrible to watch one that you love and care about go through the Access to Work process and watch their personality and everything just be kicked down one peg at a time from them saying, 'well, you don't deserve [the money]'.*

Participants' suggestions as to how to improve the service included disabled people being recruited by AtW to process applications, as they would have a greater understanding of being disabled. Others spoke of the value of the Inclusive Entrepreneurs' Network in helping them apply and secure funding for equipment and/or a support worker, although needing to rely on others' support was referred to as indicative of a broken system.

The importance of mentoring

Several participants discussed the importance of having informal support or mentoring from other disabled entrepreneurs. In the absence of a lack of formal bespoke support from the government or funders, this peer support is important in helping establish and grow their businesses.

> *So essentially, there is really very little help besides the CEO of the Inclusive Entrepreneur Network who's been amazing, yeah, to advocate for me. I've also been working on a project to help other people with disabilities. I do find like that people with disabilities help each other. It's very hard to get help outside of that circle.*

Having access to other disabled peers, mentors and networks was perceived as important in seeing what is possible:

> *It was seeing another disabled entrepreneur in my cohort [of Innovate UK's Young Innovators Programme] that made me actually feel confident enough to admit my disabilities because I'd actually not really mentioned them before. So seeing those people that do come out and talk really meant a lot for me. And I can say that other disabled entrepreneurs that I've met are the most resilient people I've ever met. They are - yeah, they are really outspoken and pushing and just really inspiring.*

Receiving mentorship from someone with shared experiences was perceived as important by some. One participant with ADHD spoke of the bonus of having a mentor also with ADHD because she understood the strengths and challenges that it posed:

> *My mentor has ADHD and it's amazing. What the accelerator programme has done is they've given me a mentor who has a disability. Like, she's also got other disabilities, and she just gets it. And she's worked in business and disability. I come from disability and employment background before I trained in therapy and helping people into work with disabilities and helping them become entrepreneurs is a set skill set. There's no point in giving you a 22-year-old advisor with no life experience, no disability and not part of any minority group and sit them there on £9 an hour and expect them to get you and your mortgage and God knows what else. We need to be user-led.*

Another participant regarded peer mentorship as being especially important for inspiring young disabled people, regarding self-employment as something that should be discussed in schools as an option to give disabled young people greater control over their lives.

Participants who provided mentorship or coaching referred to the importance of it for opening up opportunities for new entrepreneurs:

> *Sometimes it's about having to access to the right networks which is something the APPG [All Party Parliamentary Group] can definitely do. To get people with ideas who wouldn't normally be able to access funders or people that make a difference, networks that can make a difference. Opening those doors so that they can hear to.*

Another participant spoke of how coaching and mentoring other entrepreneurs is positive for his wellbeing:

I do feel that you have a responsibility to give back […], it's hugely fulfilling. And I'm just really interested in entrepreneurship. SoI, I think it's you know innovation building businesses…It gives you an engagement with different communities and to an extent to different generations. You just generally get a feeling of wellbeing because you feel like you're adding value and the immediate feedback you get from people is complementary.

Contributing to the economy

Some participants spoke positively about their role in contributing to the economy, by providing goods and services and/or providing work for others. The latter includes the engagement of support workers to assist entrepreneurs with work and daily living activities. In addition to this, via the AtW award, there is a knock-on contribution to relevant market sectors, such as those making aids and adaptations or providing training.

The importance of being an inclusive organisation was emphasised by participants. This was demonstrated, for example, by letting staff work remotely or flexibly as it was supportive of existing disabled staff and would attract disabled applicants to work in this sector. Being inclusive was recognised as being good for productivity. However, some participants pointed to lack of support as weakening their ability to contribute to the economy:

We're a micro factory that hires people with disabilities. We're an open inclusive employer and so we create jobs. Everything's at Living Wage and above and the number of people that we've worked with to support out of in-work poverty, to then be able to go and own their own homes, support them in that capacity and be paying corporation tax. We then get decimated during the pandemic because there was no support mechanisms other than the basic stuff that was open to business. We applied to our local economic agency to stabilize six jobs, create a further six and we were female-led, disability, non-displacement and multi-manufacturing capability. We were denied the support but they gave it to a male new entrant coming in to take sales with a single product. He got that grant, he's no longer in business. We are and we've just done, had our best year to date and just done a quarter of a mill turnover. So you know we're fighting back, we're far from out of the woodshed but we create jobs, that's what our role is.

It's about presenting what we do as a major contributor to the economy…If you want the over 50s, 60s to still be in the workplace then you've got to give us more help, encouragement, incentives, inducements to stick with the plot. There are too many people who are economically inactive, and we could be great drivers and role models for the economically inactive.

Health and wellbeing

Most participants who referred to their health and wellbeing since embarking on entrepreneurship gave positive accounts: running their own business, employing others and being productive were good for self-esteem and confidence. They felt less reliant on health services, anti-depressants and opioids:

I think feeling busy and feeling productive can be good for mental health. So 'I've done it' [set-up their own business] and feeling, you know, that esteem is driven by you and not the employer.

> *It's the financial contributions that I can make that to my home. I just feel that when I buy something, it's my own money, not the government's money, not my husband's money. My money.*

> *It's now being in a position to be able to employ other people with disabilities, and that's great.*

> *The confidence, the energy, the drive has been spurred on tremendously since I've been recognized.*

> *Sharing the love to other disabled people.*

However, not all accounts were positive. One young entrepreneur spoke of the strain of experiencing financial difficulties establishing her business following her graduation from university; the strain of seeking finance for living costs and investing in her business, without family support to draw on, had been detrimental to her health, which she regarded as:

> *Really terrible. I put on loads of weight, my hair was falling out. I was really stressed. I've never had a worse mental health time than being an entrepreneur, because you're constantly battling so many things…Maybe when I'm a bit more settled, it will be better. To be honest, if I hadn't have gone down the entrepreneurship route, I probably could have just got a nice design engineering graduate job. And it probably would have been better for my mental health and for my socioeconomic background.*

Suggestions for government/policy changes

Participants suggested ways to better support disabled entrepreneurs. A common theme was the need to make funding more widely available, to make applying for it more easily accessible (for example, by allowing applicants to submit evidence using mediums other than text) and to provide support with applying for funding. Another suggestion was that there should be a bespoke inclusive accelerator programme which incorporates a health and wellbeing strand.

A consistent theme was the need for more disabled people to be involved in central decision-making to find disability-led innovations and solutions to challenges faced by disabled people who are creating innovation and enterprise. This was discussed in relation to assessing applicants' claims for support from AtW awards (see earlier discussion) but also policy-making in general:

> *I think we need co-creation…More co-creation in policy. I think that's it. That's a key factor, more co-creation in policy. 'Here's what we think, can we bring this to you now?' If people with disabilities aren't included from the start and having their voices contributing from the start, we're not going to see that change.*

In agreement with this, others spoke of the need for better representation of disabled people in government and leadership roles to instigate change. This will send a strong message that people with disabilities are taken seriously. The small number of disabled people working within the government hindered progress. There is a need to:

> *Employ more people within government with disabilities that understand the additional needs of disabled entrepreneurs.*

> *The only people who understand disability are the disabled people themselves. You cannot read a book and understand it because unless you've walked in their shoes and lived their life you don't know what it's about and through experience, through understanding and through drive to be heard I think that disabled people make a much better contribution than these intellectual scepticals who try and devise things that they think are suitable.*

Participants also spoke of the need to improve accessibility to information for entrepreneurs, including through the provision of accessible platforms:

> *My entire experience unfortunately it's been very negative from the beginning. …it's about the barriers to access that I face as a disabled person who is completely blind and uses screen reading technology. So when it comes to accessing the internet, over 90% of the World Wide Web is completely inaccessible to some screen reader users. It's people with cognitive dysfunction too and people who need help with keyboard shortcuts, for example, it may be people with limb differences.*

Accessibility issues affected people in other ways. For example, within the AtW award, there is a focus on reducing the number of support worker hours by suggesting that award holders use assistive technologies, which is positioned as an either/or rather than recognising that often assistive technologies do not provide a complete solution.

Some participants commented that because they do not look disabled, they found it harder to access adjustments in communication and other accommodations particularly when applying for AtW and other funding streams and business support while creating innovation and enterprise within the entrepreneurial ecosystem. This is particularly heightened when travelling and attending meetings or consultations.

CONCLUSIONS AND POLICY RECOMMENDATIONS

This report provides statistical and qualitative analysis of an important and under-researched societal issue. The rich data provides insights which could form the basis for successful policy development in innovation and entrepreneurship created by disabled people. This in turn has the potential to increase the visibility of the gains to society of innovation by disabled people, including, and beyond, direct turnover.

Our conclusions and related policy recommendations fall into six categories.

1. The importance of well-designed government initiatives

A key message throughout the study is the success and importance of policies such as the UK's AtW award in underpinning inclusive innovation and entrepreneurship. The inclusive entrepreneurship survey showed a significant relationship between gaining an AtW award and innovation activities. This finding has wider implications as it highlights the need for a better understanding of spillover effects between different policy domains. However, this research showed that weaknesses in policy design can limit their success, particularly when it comes to awareness of the award (see also conclusion 6) and the application process.

Recommendations

1. **Collaboration** between organisations within the disabled entrepreneur sector. This an area of policy analysis that deserves action between government departments. For example, in the UK, Innovate UK should engage more with the DWP to identify how the AtW award can better support Innovate UK programmes. The spillover effects of co-existing government policies should be further researched.
2. Agencies which **work with applicants** who just failed to meet the threshold for an award. This could apply to anyone who requested reasonable adjustments at application rather than only those who have just failed to meet the funding criteria. This would create policies that are more inclusive and supportive across the community. Applicants who just fail to get funding could be eligible for a proof-of-concept stage that would be a platform for a reapplication. There is also a need for rolling programmes so that natural breaks can occur to allow individuals to navigate their conditions.
3. Draw on **international best practices**. The grey and the academic literature presented in this report offer examples from the UK, USA, Canada and the EU. For example, support might include a disability specific incubator/accelerator both virtual and physical such as the kind that exists in Australia (funded by the state of Victoria) and Europe (the EU-funded LIAISE project). This could incorporate inclusive business support and grants for innovative start-ups and scale-ups, as well as a health and wellbeing strand of support.
4. **Evaluation** is needed to demonstrate impacts, justify spending and improve policy by learning from experience. There is a need to build a stronger evidence base by focusing on disabled innovators in the full evaluations of programmes. A useful toolkit for policy evaluation is provided by the OECD (2023a) in its report "Policy Brief on Entrepreneurship for People with Disabilities", which sets out typical indicators for inclusive entrepreneurship policy evaluation.

2. The role of regional factors

The LFS and inclusive entrepreneurship survey conducted as part of this research show strong regional patterns of both self-employment and innovation, which should be reflected in national/global innovation ecosystems. Some regions have much higher rates of self-employment than others. The inclusive entrepreneurship survey variables that show statistically significant variations by region are innovation scope, time restrictions (the respondent feels subject to constraints on their time arising from disability affecting their capacity to work and earn), export activities, network membership and receipt of AtW awards.

For example, the data show that London has more innovations that are new to sector/market whereas other parts of the country do less well. The South East and the East of England outperform other regions in introducing innovations that are new to the world.

Recommendations

1. **Strategies to address disparities** such as networking levels and levels of bidding for government programmes in part by ensuring wider adoption of existing good practices. This involves building capacity at the regional level and identifying best practices in particular regions so that this can feed into a national strategy. Public policy leadership building should include working with established bespoke networks, preferably those led by disabled entrepreneurs, in different parts of the country to connect them more closely to leaders within innovation ecosystems.
2. Further **analysis** is needed to find explanations for these patterns and their outcomes. Regional differences such as those found in this study are likely to exist in other countries.

3. The need for a cultural shift

The economic and social value of disabled innovative entrepreneurship lies in direct financial outcomes through turnover and generating employment as well as the creation of new products, services and industries. Further, disabled entrepreneurs contribute to innovation by bringing new perspectives and products, including those aimed at disabled and elderly consumers. A cultural shift is needed to recognise the economic and social value of innovation and enterprise by disabled people.

This report provides new statistical evidence on the nature of innovation in the kinds of products and services disabled innovators produce. For example, software/web services are more likely to be described as innovative than other sectors, particularly consultancy activities. Hospitality entrepreneurs are likely to produce innovations that are new to the sector/market. Businesses offering brokering services are most likely to produce innovations that are new to the world. Manufacturing is more likely to be new to the market/sector than to the world. Consultancy service businesses are most likely to "export" whereas software/web services are the least likely.

Recommendations

1. Improve understanding of the **nature of innovation** by disabled entrepreneurs to design and deliver better policy measures.
2. Build **visibility and awareness** of the economic and social contributions of disabled innovators to strengthen innovation ecosystems from within.

4. The positive impact on health and wellbeing

The positive effect of innovation and entrepreneurship on health and wellbeing is often overlooked. The inclusive entrepreneurship survey evidence highlights that creating innovation/enterprise positively impacts some entrepreneurs' socio-economic status leading to less reliance on welfare benefits as their businesses grow. This conclusion is based on turnover above benefit level, which can have positive impacts on health and wellbeing for some, for example reducing reliance on anti-depressants/opioids.

Recommendations

1. Government departments should **collaborate to recognise the synergies** that exist in reducing health inequalities within this sector.
2. The **knock-on effects** on individuals' health and wellbeing need to be considered when outcomes of entrepreneurship and innovation funding programmes are assessed.

5. Recognising that intersectional discrimination limits innovation

Discrimination affects the innovation process because of the additional obstacles it presents, such as being unable to raise finance and the lack of bespoke support from mentors and business advisors. While this has been shown to affect all categories of disabled people, it is particularly pronounced for disabled women. In turn, discrimination has an impact on the propensity of candidates to apply for finance and/or innovation awards such as those awarded by Innovate UK. The impact of intersectionality discrimination should not be underestimated as the impacts can be acute.

Recommendations

1. Implement **disaggregated data** collection across departments to predict and achieve the inclusive and sustainable resourcing of this sector, maximising its socio-economic benefits.
2. Ensure **accessibility** of awards. Government agencies should not only collect data on applicants to programmes but also address discrimination towards individuals at the pre-application stage. Decision-making panels and programmes should reflect openness. The post-award process should also be considered so that effective support is in place to maximise the gains from the award.

6. Promoting awareness and ethical collaboration

The inclusive entrepreneurship survey and focus groups both identified that there was a lack of awareness among current and aspiring disabled innovators about opportunities offered by government programmes. The grey literature review highlighted that while many disabled innovators are engaged in the design process, they could be more widely engaged in leading on innovation and in the co-design of government policies directed at supporting innovation.

However, the grey literature review revealed widespread interest among UK business and policy communities, which have made recommendations for best practices. Examples include the Department of Work and Pensions (2019), the Federation of Small Business (2022), IPSE (2019), Lloyds Bank (2023), the Lending Standards Board (2021) and OECD (2023a).

The focus groups helped identify existing organisations and networks supporting disabled entrepreneurs/innovators, operating internationally, nationally, regionally or all of these. These include South of Scotland Enterprise, The Mind Tribe, The Inclusive Entrepreneur Network and Disability Wales. Providing opportunities for these organisations to better engage with policy-makers would enhance and augment what they already provide.

This suggests that there is scope for greater collaboration between different organisations and the government to address both the awareness and delivery of resources.

Recommendations

1. Appoint a **neutral government body** to undertake ethical collaboration with disabled people and other key players in the design of policies and programmes to address the barriers identified in the report, building on best practices and evaluation in the UK and internationally.
2. Develop both more local **awareness** of government policy as well as national campaigns in conjunction with existing innovative disabled entrepreneurs and other organisations.
3. Informal **support or mentoring** by other disabled entrepreneurs could be a crucial part of the entrepreneurship and innovation process by strengthening innovation capacity. This could be facilitated by discussion forums (sandpits) that promote individuals' engagement and collaboration with other disabled innovators (and aspiring disabled innovators). Identifying training and development opportunities which effectively resource the needs of both is required.

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Ability Today	Disability Resilience Network
Wired Differently	DRUK
Result CIC	London Chamber of Commerce and Industry
The Inclusive Entrepreneur Network	Ulster Bank
Rural Business Awards	Nottingham University Disability Hub
Unhidden Clothing	Disability Wales
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In Memoriam: Honouring the Contributions of Our Advisory Board Members

Clare Gray	Head of Disability Advocacy, Shaw Trust
Lindsay Adam	Founder, PCByVoice Ltd

APPENDIX A: Grey literature on innovation, entrepreneurship and disability

Helen Lawton Smith

Summary

Grey literature has been defined as "information produced on all levels of government, academia, business and industry in electronic and print formats not controlled by commercial publishing" i.e. where publishing is not the primary activity of the producing body"[8]. The advantage of reviewing this literature alongside academic literature is that alternative sources of information give a different understanding of both the challenges facing disabled entrepreneurs and of the actions taken to address them. The value added from using grey literature comes from its sharpness and closeness to events and views held "in the field".

1. In the report we synthesise the main content, analysis and recommendations from the grey literature.

   The categories included are:
   - Research reports produced by professional bodies;
   - Research reports published by or on behalf of government agencies;
   - Government documents and reports;
   - Published material by UK parliamentary bodies;
   - Published reports by academics published in non-commercial outlets;
   - Published documents on sector-led activities;
   - Other presentations.

In the UK and internationally we identified variation in the terminology used with this ecosystem. Whilst our report/paper refers to 'disabled people' in line with the social model and the definition within the Equality Act 2010, we have conveyed the terminology used at source.

2. The review of the grey literature shows that an increasing number of commercial and public reports have been published on the challenges faced by disabled entrepreneurs. This is ahead of the conventional literature and demonstrates an increasing awareness - in government, industry and academia - of the need for evidence on the challenges (as well as the opportunities) facing disabled entrepreneurs. Thus, the landscape of entrepreneurship and innovation support for disabled people is becoming better informed, more connected and especially more committed. This growing interest needs to be leveraged to build a much stronger basis for innovation through different organisations, such as those cited in this report, identifying where they can guide

[8] What is Grey Literature? - Grey Literature - LibGuides at University of Exeter

disabled people in their constituencies to existing innovation support and working with Innovate UK, to get the right kinds of support in place.

3. The review finds many themes and messages in common with the academic literature (Appendix B). Where it differs is:

    - It has a much stronger emphasis on innovation, but mainly not on innovation led by non-disabled entrepreneurs, but more on innovation in partnership or led by disabled entrepreneurs, for example in co-design.
    - It stresses the relevance of innovations for people with disabilities being rolled out to the general population.
    - It highlights how actual or perceived discrimination, conflict between policy intent and its administration which takes many forms, is a key inhibitor of innovation by disabled people.
    - It references and demonstrates UK and international best practice innovation including sector-led activities which can help to inform Innovate UK's thinking and practice.
    - It emphasises strongly the need for evaluations of programmes to have a specific focus on disabled entrepreneurs. This should reflect the innovation needs at different stages in entrepreneurship. Evaluation should also take into account intersections with support given to entrepreneurs in other government programmes, such as Access to Work.
    - Significant systemic barriers which Innovate UK will need to consider both in development and delivery of programmes.

4. The main body of the report comprises six sections.

    - Disabled people, self-employment and entrepreneurship;
    - Innovation by disabled entrepreneurs;
    - Intervention to support innovative entrepreneurship;
    - Good practice in the UK and in other countries: sector-led activities;
    - Existing government and other help;
    - Evaluation of programmes and of Government policy.

Introduction

Vorley et al. (2019) argue that supporting disabled entrepreneurs leads to stronger innovation and economic growth. "Adopting a diversity and inclusion perspective on innovation is essential to understanding how the talents and needs of everyone can be realised in a diverse, multicultural society".

Very few commercial and public reports have been published on the challenges faced by disabled innovative entrepreneurs. Those that have been published identify challenges and policy responses which are reviewed here. While none focus on economic outcomes, there is a general assertion along the lines that, "people with disabilities make significant contributions to their national economies and to society as productive employees, self-employed workers and entrepreneurs in various sectors" (EBRD 2020, 3). There is also a gap in the literature about health and wellbeing outcomes of innovative disabled entrepreneurship and the associated positives.

Many of the reports rely on secondary data. Only six in this review draw on primary evidence. Others are based on desk research.

- Vorley et al. (2019) for Innovate UK undertook quantitative survey work of 2,457 people of whom 1141 were disabled - either employees or self-employed/business owners. A series of focus groups of people with disabilities were held involving 15 participants. The focus groups comprised individuals who were either involved in or who were interested in business innovation. A literature review was also conducted.
- DWP (2019) the report was based on a literature review, 25 in-depth interviews and two focus groups with individuals in self-employment who were disabled or who had long term health issues, 10 interviews with support organisations and 5 with job centre plus employees.
- Ipse (2020) worked with research partners ComRes to get the real views of disabled people. It consulted experts from government, the charity sector and academia, and analysed data from the Office for National Statistics to uncover more about this poorly understood group.
- Federation of Small Business (FSB) (2022) employed Verve a market research agency to conduct a survey 20 October 2021-13 November 2021. It was completed by 1002 small businesses. Focus groups took place via Zoom with FSB members who employ staff. Semi-structured interviews were conducted with FSB members with a disability or a health condition. The focus groups and interviews took place between November 2021 and January 2022.
- Lawton Smith and Mansour (2022) studied the geography of networks of support for disabled and ethnic minority entrepreneurs. The population relating to disability entrepreneurship included 10 networks, 9 policy or parliamentary bodies, a national disability organisation, 2 business organisations/trade bodies (e.g. Federation of Small Businesses, FSB), 5 academics and 4 other regional bodies (31 in total). All 10 networks identified in the mapping exercise were contacted for interview. From

these, interviews were conducted with 8 specialised networks, 3 individual entrepreneurs, 6 policy bodies (for example Cabinet Office Disability Unit, Innovate UK), a national organisation which gives awards to disabled entrepreneurs, and 5 academics.

- The Lloyds Bank (2023) report is based on work by Small Business Britain which surveyed 500 disabled entrepreneurs from across the UK. A further 40 entrepreneurs were interviewed in depth along with experts in the field of disability and entrepreneurship.

What this shows is that there is an increasing awareness in government, industry and academia of the need for evidence on the nature of challenges (as well as opportunities) facing disabled entrepreneurs. This means that the landscape is better informed, more connected and more committed.

Lloyds Bank (2023) echoed the need for sector led collaborative systemic change, "it's clear that we need to do more to create systemic change in collaboration with our external partners, industry bodies and government."

Theme 1: Disability, self-employment, innovation and entrepreneurship.

Disabled entrepreneurs are increasingly important in the UK economy. The reality is that, "Disabled people are a vital and growing section of the self-employed community. In fact, their numbers have risen by 30 per cent in the last five years alone. They now make up 14 per cent of the total self-employed workforce, and this extraordinary growth shows no signs of slowing" (Ipse, 2020).

FSB (2022) reports that disabled-owned small businesses account for more than 8.6% of the turnover of all UK businesses. Disabled people in work are more likely to go into self-employment than non-disabled people in work.

Vorley et al. (2019) cited the Papworth Trust (2018) on the importance of the 'Purple pound' – spending by households with disabled people has been estimated at £212 billion a year in the UK. This is a rapidly growing market requiring innovators who understand disabled people's needs. This leads to spill over benefits. These are where innovations designed for the disabled market may spill over into mainstream markets, e.g. ageing populations and universal design/accessibility (citing Berven and Blanck, 1999).

Theme 2: Innovation: Supporting innovative entrepreneurs as an economic and societal opportunity.

Vorley et al. (2019) argue that supporting disabled entrepreneurs leads to stronger innovation and economic growth. An argument made in the literature is that 'diversity drives innovation'

and that individuals with disabilities are strong and innovative contributors to society (Daehn and Croxson, 2021).

The traditional concept of innovation tends to privilege technological over social innovation; cutting-edge, innovative products over innovations in service delivery; and economic value over social value (Andersson et al., 2012). However, these taken-for-granted assumptions can be problematised and the concept of innovation reconceptualised to include innovation with and by diverse actors and for the benefit of all" (Coogan, 2019).

Two ways forward exist. The first is funding for disabled innovative entrepreneurs and relates to how disabled people lead on creative activity as innovation leaders in their own right. The second is better funding for firms that co-develop innovations with disabled people (entrepreneurs). A related theme is that of better support for innovators in the workplace.

This current review therefore distinguishes between innovation by disabled people as entrepreneurs and innovation for disabled people. Disabled entrepreneurs may well be innovating on behalf of other disabled people as well as for other markets.

Coogan (2019) identified a number of reasons why innovation needs the talents of people with disabilities. These include people's experiences of disability might act as a stimulus for innovation (Harper and Momm 1998, cited. in Cooney, 2008); disabled innovators might better understand disabled people's needs (e.g. Andrew Slorance, founder of Carbon Black and Mobility Unlimited Challenge finalist); a rapidly growing and diversifying market needs innovators who understand it. Similarly, in their role as an 'outsider' group, they may have particular insights into incremental innovation regarding 'mainstream' products.

Vorley et al. (2019) reported that their study found that disabled employees were more likely to describe themselves as "creative thinkers" and "inventive" compared with the control group, with 37% of disabled respondents identifying as "creative thinkers", compared with 29% of the control group; and 21% of disabled respondents identifying as "inventive", compared with 12% of the control group.

Disabled focus group participants indicated that limited exposure and lack of awareness and on innovation was a significant barrier to engagement. The survey also found that the motivation to tackle societal problems was high: over half of disabled employees were interested in finding solutions to climate change, in tackling disadvantage faced by disabled people in the UK and in addressing disadvantage/inequality in the UK.

Three studies that focus not on innovative disabled entrepreneurs but on disabled people involved in workplace innovation are as follows.

Breznitz and Zehavi (2022) discuss three generic forms of government intervention – general workplace accessibility regulation, regulation for Universal Design and financial support for Assistive Technology development – that together comprise PWD-related innovation policy. They find that for Canada, Israel, Sweden and the United States, policy across all countries is similar, especially in the emphasis on universal design.

Goggin (2008) cited a report on Disablism from the UK Demos Foundation (Miller et al., 2004). In a chapter entitled "The engine of difference: disability, innovation and creativity," the authors discuss the area of inclusive design, and make the argument for the "involvement of disabled people to create a stronger model of user design". The two reasons given for this argument were that disabled people are often outstanding problem solvers because of the many challenges they face and that innovative ideas are likely to come from those who have new or different angles on old problems. However, Goggin warns that the case of the Australian "bionic ear" (cochlear implant) was flawed because the design was not informed by disabled users in their various disguises. Hence there is a need for consultation and engagement with people with disabilities, so that they are also producers/uses of innovation.

Conradie et al. (2014) focus on disabled users as lead users as a valuable source for innovation in new product development. The argument is that they are capable of detecting and experiencing needs before the general market does and are also willing to innovate because they can gain significant benefits if their needs are fulfilled. Several authors give examples of cross overs in product design to different marks. Conradie et al. find that when disabled persons participate as lead users, the product types are split in two categories. The traditional approach is where some lead users are selected from within a larger group of disabled users. In this, selected users act as innovators for a product intended for use in a wider community of disabled persons only. Examples of this are the development of artificial limbs and a service for blind persons that facilitates group learning, a brain computer interface wetness alert for persons with dementia, or a concept device for blind persons to alert them about obstacles in public transport halls. Due to their use domain, these examples are primarily focused on assistive devices.

In the second category involvement occurs in areas where disabled persons are not necessarily the only users of the intended product. Conradie et al. (2014) give examples of products that have a focus that is more general, with larger target markets in mind. For example, the design of a toothpaste package and a redesigned electric pot for persons in wheelchairs, blind persons and persons with cerebral palsy. Specifically in the context of general use products in this category, they also identify the emphasis on inclusive design paradigms, where a disabled user is included in the design process to ensure that a broad spectrum of wishes are incorporated into the design such as was the case in where a disabled lead user participated to create an interactive outdoor game that is intended for many park visitors.

The authors conclude that the cases make the case for using persons with disabilities in the design process. This includes products that the disabled users might use themselves or those intended for a general audience, such as general use products. They suggest that further research should have an emphasis on appropriate methods of disabled lead user involvement. Additionally, research is needed into the role of disabled persons as lead users for products in domains where they are experience experts, but not necessarily end users.

The theme of inclusive design was also raised by Winstanley (2017) at the UN Headquarters in New York, on the concept of disabled people becoming innovators and business owners in

their own right rather than as the recipient of products (in this case prosthetics) developed for them[9].

This was further developed by Jeetah (2022) who makes the argument that more people with disabilities should be included in the workforce as integral members of design-testing and decision-making teams. Jeetah argues that many everyday products have evolved from technology developed by or for people with disabilities. Other products are later enhanced to be used by people with disabilities. Other products are designed in parallel: uses are found for both specialized assistive technology and in everyday products (Rose, 2016). Jeetah provides examples of each kind and also makes the point about the importance of the co-creation of solutions together with and for persons with disabilities.

With respect to innovation research, Monteleone (2020, 587) makes a similar point that in responsible research and innovation (RRI), "Simply inviting diverse and disabled people to a conventional deliberative dialogue or participatory activity fails to meaningfully engage diverse perspectives. Instead, organizations and innovators engaged in RRI must consider how stakeholders communicate, provide multiple avenues for participation and create an environment that values and cultivates diverse perspectives and communication. Further, disabled people should not only be included as tokenized participants in downstream engagement activities, but as innovators, researchers, and planners".

Monteleone (2020, 588) also says, "Embracing this perspective in RRI demands inclusion of disabled perspectives not only because they are impacted stakeholders, but because those perspectives offer crucial insights to innovating better." (See also Priestley et al., 2010, also cited in the academic literature review).

OECD (2023) similarly highlight opportunities for innovation for disabled entrepreneurs through technological advances. This is both in assistive technologies but more relevant here are that technological innovations, "improve an individual's capability to adapt to their respective disability, their capacity to reach markets, and their capability to organise a successful firm that may require input from various individuals, such as bookkeepers, accountants, and delivery staff" (citing Vaziri et al., 2014). Specifically, "Adapting contemporary technology for people with disabilities is a growing industry in itself, one frequently designed and run by entrepreneurs with disabilities" (de Witte et al., 2018, p. 11).

Global Disability Innovation (GDI) Hub is 'a research and practice centre driving disability innovation for a fairer world' working with 70 global partners including the UK. In *its Disability Innovation Strategy 2021 – 2024* GDI define Disability Innovation "as the process of addressing entrenched disability challenges by co-designing solutions with communities and sharing knowledge to actively promote social justice". "Disability Innovations: are the solutions – policy, practice, services or technology– that result from this process. To be successful they must be useful and used, and better than before' (p. 14). The focus on the activity reported

[9] https://www.universalinclusion.co.uk/images/UN_presentation_December_2017.pdf (accessed August 14 2023)

seems to be on improving the environment for disabled people rather than focusing specifically on innovative entrepreneurship, except for example in the creative sector as artists, designers and developers (p. 23). Again, this initiative is for, rather than by, disabled entrepreneurs.

Incubators

OECD (2023) citing Honig (2004), proposes that both virtual and physical incubators can be a way forward in supporting innovation.

"In this model, trainers and coaches facilitate peer support in which participants are able to apply ideas after each weekly meeting and bring their implementation insights to subsequent meetings to benefit other participants. These programmes typically include the opportunity for engaged peer-to-peer networking, periodic remote (virtual) mentoring, and the provision of tools that facilitate contingency planning, financial planning, experimentation and assessment". Contingency planning is based on experiential learning and employs iterative planning steps to validate or invalidate different premises, focusing only on the essential elements of planning for different nascent entrepreneurial stages.

This is an important innovation for entrepreneurs with disabilities due to the reliance on a digital channel that can contextualise physical and cultural barriers and can provide the necessary diversity and flexibility to engage persons with a disabilities (Krüger and David, 2020). Thus, the virtual incubator provides an opportunity to develop a community of practice that encourages knowledge translation and diffusion regarding a shared set of problems on an important topic (citing Bezyak et al., 2018).

Theme 3: Areas to improve growth in the sector.

Innovation by disabled entrepreneurs cannot be understood without an appreciation of the challenges faced at different stages in the entrepreneurship process. This begins with having an idea that would lead to self-employment and the intention to start a business; the boundary stage of starting a business and accessing resources; and then running a business with the intention to innovate and grow whilst navigating their presenting symptoms.

The literature shows a general consensus on patterns of self-employment by disabled people both in the UK and in other countries (see OECD, 2023). DWP (2019) find that some of the main challenges faced by disabled people and those with long term health conditions were similar to all entrepreneurs and some are unique to this group. Similarly, Ipse (2019) found that a key area where disabled and non-disabled people diverge in identifying self-employment was push factors. Many see employment as inflexible for disabled people, who have to manage physical or mental health conditions and impairments. Self-employment offers them an opportunity to work around these and building economic and social empowerment (Drakopoulou Dodd, 2015). These include reducing some mobility and transportation difficulties which travelling to an employed position may cause.

Challenges faced by disabled innovative entrepreneurs are explored first from the pre-enterprise stage, and then from when entrepreneurs have become established.

(i) Pre-start-up stage and intention to start a business

Vorley et al. (2019) and others have noted that participation in entrepreneurship is defined by minority status and inter-sections with other social categories such as age, gender and socio-economic status. These relate to unemployment, social status, levels of human capital, and a limited access to key resources.

Unemployment, social status and education

Vorley et al. (2019) report the following information:

- Working age disabled people are more than twice as likely to be unemployed as non-disabled people (Labour Force Survey January to March 2018).
- Disabled people are more likely to be living in poverty, earn less if they are in work, have higher living costs, are twice as likely to have unsecured debt of more than half their income, and on average have much less in the way of savings and assets (i.e. lack of start-up capital) than nondisabled people (Papworth Trust, 2018).
- Disabled people aged 16-18 are at least twice as likely not to be in education, employment or training (NEET) as their peers. At degree level, disabled students are most under-represented in business and administrative courses, at 8.2% compared to 14.9% of non-disabled students, and disabled people are less likely to have a degree (Papworth Trust, 2018).

Discrimination

- Disabling attitudes of business advisers may act as a barrier (Kitching, 2014).
- Consumer discrimination which might deter potential disabled entrepreneurs if there is a lack of demand for goods and services produce by disabled entrepreneurs (Kitching, 2014).
- Disability may create barriers to accessing appropriate training / support (FSB, 2022).
- Public perceptions (1 in 3) that disabled people are less productive may affect not only job opportunities, but promotion and development opportunities that could be pathways to innovation (Scope, 2018, OECD 2023).
- Disabled innovators may not identify as 'disabled' or disclose their status owing to social stigma around disability, therefore becoming 'invisible' and limiting options for promoting diversity (e.g. via role-models and mentors).
- Business owners who are disabled or who have a health condition have experienced discrimination or negative treatment have experienced a barrier due to having a disability or health condition such as not being able to commit to consistent hours when applying for financial support and lacking access to equipment and disabled entrepreneurs are less likely to use business support than non-disabled counterparts (FSB, 2022; OECD, 2023, Lloyds Bank 2023).

Welfare support

- • Fear of losing disability benefits (Drakopoulou Dodd, 2015), the 'benefits trap' (Kitching 2014; Kasperova and Kitching, 2021) is a very real deterrence to entrepreneurship.

Business support needs at early and later stages.

These range from the early stages of setting up a business to running an established business.

With respect to setting up a business, Vorley et al. (2019, 23) identified the top three support needs for disabled employees to set up a business as access to finance, information, business law, having a mentor, and role models. These are regularly found in other surveys in the grey and academic literature. As at preliminary stages, disabled people need help with managing a disability or a health problem, or access to specialist equipment.

In relation to innovation, Vorley et al., (2019) reported additional barriers to becoming innovative entrepreneurs which lead to an under-representation of disabled people in business innovation and how disability can aggravate or create additional barriers. For example, financial and educational disadvantages may limit the ability of disabled people to innovate, even when employed or acting as entrepreneurs (see also OECD 2023).

Finance

EBRD (2020), like many other reports identify accessing finance as a key challenge faced by disabled entrepreneurs (Vickers et al. 2009, OECD 2023). As well as a lack of personal financial resources, poor credit ratings due to unemployment or the long-term receipt of social benefits, they may also lack collateral on which to secure loans and negative bias among lenders who may erroneously view people with disabilities as high-risk borrowers.

The Lending Standards Board (LSB) (2021) collaborated with the All Party Parliamentary Group for Inclusive Innovation (APPGIE) and disabled innovators and entrepreneurs to produce an insight report 'Inclusion in Business Banking & Credit: disability and other access needs' [10]. Like EBRD focused on the private sector provision of finance. It recommended that banking staff be trained to identify when a need should arise and know what steps the firm. This point was also made by FSB (2022).

Other evidence suggests that physical and virtual access to formal financial services can also be limited – more than 30 per cent of banks are not accessible to people with disabilities in some countries (citing UNDESA, 2018).

[10] https://www.lendingstandardsboard.org.uk/inclusion-in-business-banking-credit-disability-and-other-access-needs-report-launched/

Lack of relevant business knowledge and skills

Limited access to formal education and prior employment opportunities may also leave many disabled people without key skills, business knowledge or work experience to support subsequent entrepreneurial activity (Kitching 2014, Vorley et al., 2019).

Lack of expertise by traditional agencies: ecosystem failures

A lack of appropriate business support services. Business advisers, for example, are often reluctant to recommend self-employment as a career option for disabled people and even actively attempt to dissuade them. These might include that support services might discourage self-employment. A lack of knowledge and support by agencies, and agencies and service providers to be evaluated using firm 'hard outcomes' often with very specific and rigorous stages deadline for the achievement of outcomes – not compatible with the reality of disabled entrepreneurs' conditions (Drakopoulou Dodd, 2015).

Hence there is a need for entrepreneurship education. Kruger and David (2020) argue that persons with disabilities can benefit from entrepreneurial education in order to develop entrepreneur skills for starting their own opportunity driven (i.e. innovative) businesses.

Limited social capital and networks

People living with disability can face multiple forms of social exclusion. Drakopoulou Dodd (2015) finds that social capital (as well as wider knowledge, experience, and access to resources) is especially critical to start-up success and subsequent venture growth. Yet, as a result of their relative exclusion from educational and workplace interactions, the disabled are placed at a major disadvantage in terms of being able to develop the requisite social capital and networking ties needed to support (successful) entrepreneurship. This is a point raised by DWP (2019). Drakopoulou Dodd and Keles (2014) build on the importance of expanding the networks of disadvantaged entrepreneurs in order to build stronger businesses.

Therefore, as the FSB (2022) suggest, support should be provided not only through traditional channels but also should be delivered through those more commonly (as identified by Lawton and Mansour (2022) have been created by disabled people when traditional channels were not meeting their needs) used by disabled entrepreneurs such as peer networks. Accordingly, those networks need to be recognised and enhanced not replaced echoing the 'nothing about us without us' by bringing together professionals and disabled entrepreneurs through the creation of a national taskforce networking events (Drakopoulou Dodd, 2015). These could for example be specifically targeted to innovation.

Theme 4: Good practice in the UK and in other countries

Many examples of good practice exist in the UK and in other countries that can inform UK policy-making.

UK

The East London Inclusive Enterprise Zone[11] (ELIEZ) formed by UCL in 2019 as a consortium with 12 partners to create something new for inclusive innovators. This purpose-built community opened the door to a new model of business support for disabled entrepreneurs or businesses focusing on disabled people.

Thirty fledgling businesses, all with a shared focus on inclusive innovation, received a wide range of support, training and mentoring. The entrepreneurs also had access to a specially designed accessible co-working space at Plexal at the heart of the Queen Elizabeth Olympic Park in East London. Many of the businesses who took part have gone on to launch innovative new products and services for the disabled community, including:

- Huru, a digital platform that allows families that no longer live together to communicate, collaborate and look out for each other.
- Patchwork Hub, a remote working platform that's leading a culture change in work and accessibility.
- Mumbli, a hearing wellness platform that transforms social spaces so that everyone can hear and be heard.
- More Human, an events platform that makes it easy for anyone to organise and deliver a premium social experience.

Sector-led activity

A key element in the landscape is identifying what kinds of support already exist in the UK so that areas of best practice can be linked and the limitations of what exists understood and need to be addressed in order to build a stronger ecosystem (Kruger and David, 2020).

The importance of good practice models including sector-led activity is that it foregrounds different forms of innovation that lead to coherence in establishing what kinds of support disabled entrepreneurs need to help them to innovate. They are examples of what can be achieved when led by disabled people advocating on behalf of disabled people and working in conjunction with the private sector, policy-making bodies and academia. Successful engagement, innovation and growth means adherence to "nothing about us without us". Where this happens the landscape of inclusion evolves because of the greater levels of

[11] The UK's first specially designed community for disability-focused innovators | Innovation & Enterprise - UCL – University College London

understanding through incorporating different kinds of evidence and interpretation as well as a consensus on the importance of this issue.

Sector-led initiatives are also impactful as they go from inception of activity to informing policy. Activity includes published reports and documentation on presentations and activities in a variety arena which demonstrate both leading on new thinking as well as responding to current policy agenda. Such activity leads to better representation and visibility of disabled entrepreneurs which in turn leads to a better evidence base. A growing trend is for sector-led activities to include working with universities - with the reciprocal benefit of impact including validation of professional practice and academic analysis.

In this section, Universal Inclusion and Jacqueline Winstanley's work which led to the formation of the All Party parliamentary Group for Inclusive Entrepreneurship (APPGIE) chaired by Dr Lisa Cameron, MP are given as examples of sector-led activities. Another example is the SAMEE charity.

Universal Inclusion & the Inclusive Entrepreneur Network

Since 2012 Jacqueline Winstanley has been championing inclusive entrepreneurship. In practice this means challenging prevailing attitudes as well professional and policy practice.

She has undertaken a series of reports, recordings and projects, has hosted events, been a keynote speaker and she is an author and contributor and engages in academic research. She is a major contributor to UK and international policy-making arenas. A full list of her activities is found in Appendix A.I

She has created a bespoke network and programme for disabled entrepreneurs which combines traditional business support and the essential health and wellbeing element required to successfully navigate creating innovation and enterprise.

Two examples of her recent work are given in Box 1 and Box 2. These give an example of a focus on innovation and an international presentation.

BOX 1

"This is the first EXPO of its kind in the UK, bringing together Inclusive Entrepreneurs who have protected characteristics, particularly disabled entrepreneurs.

As an organisation, we have a commitment towards innovation within inclusive communities, and together we are creating the 2030 Agenda Paradigm Shift tasked of us in order to achieve the Sustainable Development Goals (SDGs) - where communities start to see people who face barriers, not as burdens, but as contributing citizens who bring a new and exciting presence to the table.

The resultant contribution to the growth of the economy from such enterprise is what we term Inclusive Economic Growth." Inclusive Entrepreneurship Expo 2020 (universalinclusion.co.uk)

Jacqueline Winstanley gives a keynote presentation at Harkin International Disability Employment Summit 7- 8 June 2022, Belfast

BOX 2

The Harkin Summit is internationally recognised as a platform that brings together leaders and activists across Business, Government, Philanthropy, the Third and Voluntary Sector, and Academia to highlight and address disability employment issues, showcase best practice and success, build relationships and challenge for change.

Jacqueline was invited because of her extensive engagement with policy and practice of support for entrepreneurs with disabilities. She provides the secretariat for the UK's All Party Parliament Group on Inclusive Entrepreneurship.

https://www.disabilityaction.org/Pages/Category/harkin-international-disability-summit-7-8-june-2022

The work of Universal Inclusion and the Inclusive Entrepreneur has been validated through a number of reports such as ESF funded report on Inclusive Entrepreneur Programme 2015 and Ahead of the Arc - a Contribution to Halving the Disability Employment Gap, APPG on Disability, 2016, an academic article https://www.universalinclusion.co.uk/images/Inclusive_entrepreneurship_-_A_critical_look_at_inclusion_of_persons_August_2020.pdf, as well as close engagement with the Centre for Innovation management Research (Birkbeck, University of London, bbk.ac.uk/cimr).

APPGIE

Universal Inclusion and Jacqueline Winstanley's work led to the formation of the APPGIE, chaired by Dr Lisa Cameron MP and supported by Savvitas. It was set up in the height of the pandemic in July 2020 to ensure that Parliament is fully informed on what is needed to create and sustain the most beneficial conditions for inclusive economic growth[12].

"Its goals are to stimulate, encourage and nurture inclusive entrepreneurship throughout the country, and to engage with entrepreneurs who have protected characteristics, particularly disabled entrepreneurs."

With respect to innovation, a key objective is to create an Inclusive Entrepreneurship Accelerator Programme particularly for disabled people which includes a mentoring programme and a health and wellbeing programme.

[12] https://www.universalinclusion.co.uk/appg-ie-progress

In 2020 APPGIE embarked on a two-year programme of work built on sector led recommendations on how to support disabled people to create enterprise and innovation upscaling the sector[13].

In sum, without the Inclusive Entrepreneur network and sector-led recommendations, there would be no APPGIE. For example, no meetings with the Lending Standards Board and the resultant insight report and thereby a lack of recorded representation of the interests of disabled entrepreneurs in parliament.

SAMEE

The Support And Mentoring Enabling Entrepreneurship (SAMEE) body was launched in 2015 with "a mission of enabling every one of all abilities to proudly and independently provide an income for themselves and their families". It formally became a charity in 2016.

The charitable purpose is "to enable vulnerable people in the community to explore self-employment by creatively developing their ideas and potential with the ultimate aim of helping them achieve financial independence through successful self-employment and/or improved employability prospects". https://samee.co.uk/

[13] https://www.universalinclusion.co.uk/appgie

International best practice

Case Study 1: Australia

An example of a physical incubator is from Australia (OECD 2023, page 23). This is a non-government initiative leverages non-profit and for-profit actors.

The Good Incubator, Australia

Intervention type: Integrated support offered through a dedicated business incubator.
Description:

The good incubator is managed by Impact Co. (a private consulting company), with support from LaunchVic (Victoria's Start-up Agency) and the Victorian Department of Health and Human Services (DHHS). It is aimed at any person with a disability (of any kind) that has a business idea or already runs a business.

The incubator provides a range of supports to help people with disabilities enter into or grow their existing business. It includes a 9-week programme comprised of:

• 11 half-day workshops in Melbourne on personal and business development;

• Accessible online modules covering design thinking, minimum viable product development, account, marketing and more;

• Networking and community development events every 2 weeks;

• Group tutorial events every 2 weeks; and Individual coaching and mentoring to support personal and professional needs.

Following the programme, participants can participate in 2 half-day workshops to support people with disabilities already running their own business to pitch and market their business ideas.

The incubator was co-designed by people with disabilities. It is offered at no cost to participants and support is available to help cover travel and accommodation for those from outside of Melbourne. Support workers are welcome to support the participation of the entrepreneurs.

Results achieved:

The incubator has had two cohorts of participants, one in 2019 and the second in 2020. The businesses operated by participants are varied and some, but not all, are business ideas that seek to improve the wellbeing of people with disabilities.

Lessons for other initiatives:

This model demonstrates that dedicated incubators can work. An important success factor is to work with motivated and experienced support providers in the non-profit and for-profit sectors that are close to the disability community and have experience working with the targeted client-group.

Source: (The Good Incubator, 2020)[14]

[14] About Us — goodincubator Accessed April 13 2023

Case Study 2: European Enterprise Promotion Awards

OECD (2014, 12) reports that "the European Commission, DG Enterprise and Industry operates the European Enterprise Promotion Awards, which provide awards to entrepreneurs in six categories and a Jury's Grand Prize for the entry that is deemed to be the most creative and inspiring entrepreneurship initiative in Europe. One of the six categories is for 'responsible and inclusive entrepreneurship', which recognises regional or local actions promoting corporate social responsibility and sustainable business practices. This includes support for people with disabilities and the 2012 winner of this category was a project called 'Disabled at Work' that was operated by a group of 16 organisations from Turkey and the Netherlands. It provides training and mentoring for people with disabilities that seek to enter the workforce, either as an employee or through self-employment."

European Enterprise Promotion Awards

The award categories are:

1. **Promoting the entrepreneurial spirit** - Recognises initiatives that promote an entrepreneurial mindset, especially among young people and women
2. **Investing in entrepreneurial skills** - Recognises initiatives that improve entrepreneurial, managerial and employee skills
3. **Supporting the digital transition** - supporting the digital transition of enterprises enabling them to develop, market and use digital technologies, products and services of any kind.
4. **Improving the business environment and supporting the internationalisation of business** - Recognises innovative policies and initiatives at national, regional or local level, which render Europe the most attractive place to start a business, operate it, make it grow and scale it up in the single market, simplify legislative and administrative procedures for businesses and implement the 'Think Small First' principle in favour of small and medium-sized enterprises
5. **Supporting the sustainable transition** - Recognises initiatives that support the sustainable transition and support environmental aspects such as the circular economy, climate neutrality, clean energy, resource efficiency or biodiversity
6. **Responsible and inclusive entrepreneurship** - Recognises initiatives that promote corporate social responsibility among small and medium-sized enterprises and entrepreneurship among disadvantaged groups such as the unemployed, legal migrants, disabled, or people from ethnic minorities.
7. **The Grand Jury's Prize** can be from any of the six categories and will go to the entry considered to be the most creative and inspiring entrepreneurship initiative in Europe.

(Source https://single-market-economy.ec.europa.eu/smes/supporting-entrepreneurship/european-enterprise-promotion-awards_en)

Case Study 3: USA

Born for Business

Born For Business is a new ground-breaking docuseries focused on the talents, innovations and impact of entrepreneurs with varying disabilities.

This toolkit provides an inventory of existing materials, advice and guides for those jobseekers with disabilities ready to become self-employed, launch a new enterprise, or develop their entrepreneurial skills.
https://www.respectability.org/resources/job-seekers/entrepreneurship/

Case Study 4: EU

Linking Incubation Actors for Inclusive and Social Entrepreneurship (LIAISE) Project

Intervention type: The project supports a collaboration between the European Union and three partner networks (European Innovation Network, Impact Hub and the European Venture Philanthropy Association) to create a network of networks. The aim is to make entrepreneurship ecosystems in the EU more inclusive by increasing awareness of the challenges faced by under-represented groups and to offer tools to improve the support offered by business support organisations.

Description: The LIAISE project aims to spark the development of an "eco-systemic" change by empowering and supporting business support organisations and investors to better support entrepreneurship and self-employment from under-represented groups including people with disabilities. The logic is that by bringing incubation and business support services closer to people from vulnerable groups, they will have greater opportunities to fully participate in the economy and society.

The LIAISE project supports actors such as business support organisations, impact hubs and investors to increase their capacities to work with people from under-represented groups and expand their outreach to these groups. It also helps potential entrepreneurs from under-represented groups in accessing financial tools to increase their chances of achieving business survival and growth.

LIAISE offers experiential learning opportunities to European business support organisations, which will have the possibility to engage and work with peers, social actors, entrepreneurs from vulnerable groups and experts in thematic Communities of Practices (CoPs). One of the five COPs covers people with disabilities and each CoP works according to the same methodology: (i) Collect information based on experiences; (ii) Monitor ongoing initiatives and programmes; (iii) Pilot new approaches in the fields of inclusive and social entrepreneurship; and (iv) Explore how policy can be strengthened using the participatory process developed by the CoPs.

The LIAISE project is funded by the European Union Programme for Employment and Social Innovation (EaSI) for the period 2021-22.

Results achieved: Members of each CoP meet monthly (since May 2021) and have regular opportunities to exchange during regular events for members of the five CoPs. The CoP related to people with disabilities has contributed good practice cases to a Better Incubation good practice compendium report in November 2021 and supports a contest for entrepreneurs with scalable solutions to social and environmental challenges along with the other four CoPs. The contest will provide three winners with a cash prize of EUR 7 000, 15 hours of coaching, incubation support plus a travel budget to participate in events. The winners were to be selected at a conference in December 2022.

Source: OECD (2023)

Case Study 5: Canada

Entrepreneurs with Disabilities network, Nova Scotia Canada

In March of 1997, Western Economic Diversification Canada created the Entrepreneurs with Disabilities program. The program was established to make it easier for entrepreneurs with disabilities to pursue their business goals and contribute to economic growth within their rural communities.

The program offers:

Repayable business loans with terms that are specifically tailored to address each individual entrepreneur's needs.

Loans received under this program can be used for:

Starting or expanding a business

Applying new technology to your business

Upgrading facilities and equipment

Developing marketing and promotions material

Establishing working capital for anticipated sales increases

To qualify for the Entrepreneurs with Disabilities program you must:

Live in a rural community in Western Canada, and

Have a disability that impairs your ability to perform at least one of the basic activities of self-employment or entrepreneurship

Sources:

https://futures.bc.ca/business-services/entrepreneurs-with-disabilities/
https://volunteerhalifax.ca/place/entrepreneurs-with-disabilities-network/

https://weconomie.ca/s/v/Entrepreneurs-with-Disabilities-Network/

Theme 5: Reviewing government programmes: Relevant policy recommendations from cited reports.

Most of the UK reports cited discuss and make recommendations on government programmes designed to support self-employment and entrepreneurship. Many focus on publicising existing programmes; the need to develop partnerships between different agencies to support disabled entrepreneurs and by extension innovative disabled entrepreneurs in order to mainstream EDI support for minority entrepreneurs.

Key findings from each report are included.

Vorley et al. (2019)

Recommendations for Innovate UK and for policymakers are:

- To develop a clear policy rationale for taking action to increase equality, diversity and inclusion in business innovation, that recognises the structures of exclusion and the moral imperative, beyond the economic business case;
- A hybrid/blended approach - evidence-based targeting of underrepresented groups alongside increased efforts to embed diversity and inclusion into mainstream programmes, to address multiple disadvantage;
- Greater collaboration - Joined-up policy and partnership approaches, across initiatives / government agencies; Bottom-up initiatives, co-designed with minority communities - "Nothing about us without us".

Vorley et al. (2019, 23) found in their study that in order to work towards the goal of inclusion, participants also pointed to the need for increased collaboration, not only across different government departments and agencies, but also, importantly, with community-led initiatives. Such partnerships could potentially allow policy initiatives to widen their reach amongst minority groups, whilst also building an atmosphere of trust. Moreover, in order for such initiatives to have an impact and transform the system, there needs to be accountability and genuine, sustained commitment to achieving this goal.

"We recommended that the traditional business support organisations should actually partner with associations of disabled entrepreneurs and disability-led organisations so that they could provide the support, but…through the existing experts. So, we felt that was the right combination, because we wanted impairment-specific advice or information, but they also wanted the general advice about writing business plans or market research. So, they wanted that mix of the specialist advice and the non-specialist advice" (Disabled focus group participant in Innovate Vorley et al., 2019).

DWP (2019)

The report identified that ideal support includes:

- Peer mentoring from someone with a lived experience of disability, a centralised information source of guidance;
- A service that provides flexible ad hoc assistance with things such as physical access and travel; and
- Financial help via interest free loans for start-ups or preferential rates of borrowing.

Goggin et al. (2019)

The authors argue that while governments take pivotal roles in formulating and implementing digital disability policies, people with disabilities apply their own agency to take advantage of market opportunities through economic participation in digital economy. The state responds positively to the agency of people with disabilities in social development and participation by opening opportunities for research grants, start-up funds, publicities and policy lobbying. Their argument is that there is hope in such a collaborative and mutually constitutive approach to innovative social policies that aim at inclusive and sustainable growth.

Ipse (2020)

- Increase powers of the Small Business Commissioner: Give the Commissioner the power to fine late payers.
- Increase New Enterprise Allowance (NEA) mentor and benefit support to two years: NEA benefit and mentor support should be increased to reflect the length of time individuals need support whilst establishing their business.
- **More publicity of the New Enterprise Allowance:** The Department for Work and Pensions should publicise the NEA more broadly in Job Centre Pluses, and also mandate Work Coaches to make all eligible people aware of the NEA.
- Publicise Access to Work (AtW): The DWP should publicise ATW more broadly in Job Centre Pluses and mandate Work Coaches to make all eligible people aware of AtW – it is the government's best kept secret for supporting disabled people in work!
- **Mentoring schemes should be more readily available to provide individualised and solution-focused support:** The Department for Work and Pensions and local government should partner with charities and organisations that support disabled people to enter and sustain self-employment.
- **Trade associations and trade unions should offer tailored support for this group:** Organisations like Community and IPSE should identify practical ways to support the disabled self-employed.
- **GP referrals to Access to Work:** GPs should refer disabled people onto AtW and particularly focus on those with mental health conditions, who are currently underrepresented.

EBRD (2020)

Recommends that policy responses need to address each of these with the addition of two others. These are, supporting the development, acquisition and use of assistive technologies and improving the availability and accessibility of online business services, such as business registration, tax filing and business information resources.

It also recommended that private sector organisations do and should offer dedicated business financing products to applicants that may struggle to access mainstream private credit.

FSB (2022)

- The Department for Business, Energy & Industrial Strategy (BEIS) should set a target to grow the number of disabled entrepreneurs by 100,000 by 2025, and over 250,000 by 2030 (p.27).
- BEIS should produce condition-specific 'Pathways to Entrepreneurship' strategies, to address the differing barriers faced by those with different conditions (p.27).
- The Department for Work and Pensions (DWP) should replace the scrapped New Enterprise Allowance with a more ambitious scheme and ensure Disability Employment Advisors are appropriately trained to enable self-employment (p.28).
- DWP should scrap the 'one-chance-only' rule that prevents disabled entrepreneurs using the Government's Access to Work scheme (p.29).
- The British Business Bank should launch a Disability Angels CoFund, based on the Angel CoFund, and provide funds for additional start-up loans ear marked for disabled entrepreneurs (p.28).
- UK Government should require major banks to measure and publish the proportion of loans given to disabled entrepreneurs. This should mirror the Rose Review recommendation with regards to female entrepreneurship funding transparency (p.27).
- UK Government should address the critical gap in enterprise data through exploring the collection of disability data points in government data, such as through the Small Business Survey, and adding a voluntary tick box to the VAT Return form or the Annual Returns form submitted to Companies House (p.30).

Lawton Smith and Mansour (2022)

The authors recorded feedback on Innovate UK from their interviews. This included:

- A need for different government departments – e.g. Innovate UK and BEIS to work together;
- Difficulties in applying for Innovate UK funding;
- Greater transparency of options on Innovate UK on application criteria on the website is needed;
- Disabled entrepreneurs often fall off credit ratings. Innovate UK should understand that when trying to support people particularly with protected characteristics, disabled people more so, these programmes need to be longer term and need to

incorporate health and wellbeing. Therefore, funding for these programmes has to be patient;

- Sometimes the language on the Innovate UK website is not appropriate for people with disabilities and can be inaccessible. There is a need for a disability steering group to advise on policy; and,
- Support organisations need to involve neurodivergent people in the design of programmes. Innovate UK and UKRI currently have no such programmes. Innovation is not just technological but also about process innovations and ways of working which can harness linear and non-linear ways of thinking.

OECD (2023)

- Increase the visibility of entrepreneurship by people with disabilities;
- Boost entrepreneurship skills through training and peer-learning;
- Improve access to start-up finance;
- Ensure that the local ecosystem is supportive of entrepreneurs with disabilities; and
- Use income support systems to support entrepreneurship.

Improving disability inclusion within general entrepreneurship programmes by, for example, (i) adjusting in-take mechanisms to consider criteria beyond profits and innovation activities; (ii) reserving a number of places for entrepreneurs that fall outside of the main selection criteria; (iii) using promotional and teaching materials that are more sensitive to disability issues by depicting some examples of entrepreneurs with disabilities; and (iv) giving greater consideration to the location of support schemes and physical accessibility barriers.

A critical success factor is that strategies are co-created with representative disability organisations so that they are engaged in decision-making and the design of entrepreneurship support. This will help to ensure that approaches are appropriate and supported by the community.

Access to Work

There is a general consensus that Access to Work (AtW) programme needs to be improved (see for example, Drakopoulou Dodd and Keles, 2014; Lawton Smith and Mansour 2022; and FSB (2022)). FSB (2022) found that 13% of disabled entrepreneurs or who have a health condition have used ATW, but a third had not been aware of it, and 25% were not aware that it applied to the self- employed.

Kasperova (2021) reported on her study that showed that Access to Work, Personal Independence Payment and Universal Credit were negatively impacting entrepreneurs' ability to start and maintain a successful business.

Among Kašperová's key findings were that:

- Disabled entrepreneurs are a highly diverse group and the level of support that individuals need varies considerably;
- Welfare initiatives provide vital support for entrepreneurs, such as topping up income, covering additional costs that disabled workers face and financing in-work support;
- Among interviewees, there was a perceived injustice surrounding changes to welfare support, which caused a reduction or interruption to the support they had previously received;
- Changes to welfare support had a significant impact on individuals' businesses and their wellbeing, causing increased anxiety about sustaining income and in some cases leading to the closure of the business.

Despite the small sample size of this pilot study, the results strongly suggest that welfare support is vital for some entrepreneurs to build a sustainable business. Kašperová also suggested that, in reducing the in-work disability support available, the government contradicts its objective to reduce the disabled employment gap. It would be useful for further research to explore the scale of the impact that welfare reforms have on disabled entrepreneurs and the complex relationship between disability, self-employment and welfare support.

Theme 6: Evaluating public policy

OECD (2014) argues that evaluation is needed to demonstrate impacts and justify spending and to improve policy by learning from experience. Key issues to be assessed include the relevance, effectiveness and efficiency of policy and whether it can be improved.

"Inclusive entrepreneurship policies are intended to give everybody the opportunity to start up in business or self-employment regardless of their social background and to improve labour market outcomes for people who are under-represented or disadvantaged in entrepreneurship and self-employment. This may occur directly, through increasing the number and quality of businesses and self-employment start-up activities, or indirectly, by providing an improved pathway to employment for people who do not eventually start-up or remain in business or self-employment. They work by targeting specific populations such as youth, seniors, women, the disabled, ex-offenders, ethnic minorities, and the unemployed with tailored interventions or improved accessibility to mainstream actions in areas such as access to start-up financing; training, mentoring and consultancy; entrepreneurship education and awareness raising; network building; or improvements to social security and business regulation systems" (page 3).

Type of Indicator	Examples	Typical questions
Baseline indicators for target groups	Number of business owners Number of self-employed Business start-up rate Rate of entry to self-employment	Is inclusive entrepreneurial activity growing? Where are the gaps?
Policy activity indicators	Number of people supported by policy Proportion of beneficiaries from target groups	Are the activities relevant to beneficiaries' perceived needs? Are the beneficiaries those with the greatest need?
Customer satisfaction	Participants' views on quality of the programme	Is the delivery method appropriate? Are there key barriers not addressed by the programme?
Policy output indicators	Change in proportion of entrepreneurs accessing business loans Change in proportion of entrepreneurs with business training Change in attitudes to entrepreneurship and self-employment	How far is policy addressing barriers to entrepreneurship in the target group?
Policy outcome indicators	Rate of business start-up by policy beneficiaries Rate of entry to self-employment by policy beneficiaries Survival rate after 6 months, 1 year, 3 years Employment in businesses created	Does policy support lead to business creation? Are the businesses sustainable?
Policy impact indicators	Number of beneficiaries in employment after a period of time Income of beneficiaries after a period of time	Even if the enterprises did not survive, has the experience benefited the beneficiaries of the programme?

Typical indicators for inclusive entrepreneurship policy evaluation. Source: OECD (2014).

Drakopoulou Dodd (2015), however, points out that the use of 'hard' outcomes, with specific and staged deadlines for outcomes may work against disabled entrepreneurs who find that their conditions force a slower and much less predictable controlled pace of start-up.

LSB (2022) also suggest that firms should consider how they would measure success when reviewing how disabled customers and those with access needs are treated. For example, what information they have available in relation to quantifying the number of customers requiring support. Quality assessment is also important. There should also be visibility about what is being done so that firms can stay accountable by updating on progress. Moreover, a knock-on effect is that improving accessibility in one area, for example for disabled customers, 'opens the door for everyone else'.

Social returns on investment in access are illustrated by the case of the SAMEE charity, which works with disabled people seeking self-employment. In January 2020 the New Economic Foundation featured SAMEE as a case study for highlighting social return on investment.

'SAMEE creates an estimated £8.56 million in social value per annum at a cost of £73,860, which implies a benefit-cost ratio of 115.9 to 1. This implies that for every £1 spent, £115.92 of social value is created. This is an exceptionally high benefit-cost ratio, driven by the sharp improvement in wellbeing and employment outcomes reported and the high level of attribution to SAMEE as opposed to other factors' (https://samee.co.uk/).

Conclusions

This review has recorded what has been published in the grey literature which has been written about the challenges and opportunities facing disabled entrepreneurs with a view to providing policy analysis and from this, lessons for policy-makers since 2019. The date marks the publication report for Innovate UK by Vorley et al. (2019) which broke new ground because of the specific focus on innovation by disabled as well as ethnic minority entrepreneurs and by people in work.

Since then, published reports have mainly continued the focus on entrepreneurship and self-employment rather than on innovation. The exceptions are studies and presentations which have emphasised the importance of recognising the contribution of disabled people as innovators but mainly from the perspective of co-design rather than as lead entrepreneurs. This is important for Innovate UK because it suggests a line of innovation funding.

It is also important because it also reinforces the point made throughout the grey literature, especially which published in the UK that it is essential that all policy and interventions are developed in collaboration with and not just for disabled entrepreneurs.

A further common strand is that Innovate UK programmes need to dovetail with business support provided by other government departments such as the DWP AtW programme, and the British Business Bank. The private sector and sector-led initiatives are also important resources in the design and implementation of policy.

A role of Innovate UK is to provide a credible platform for small initiatives and to showcase successful innovative disabled entrepreneurs.

The best practice examples, both UK and international demonstrate a range of enterprise promotion activity. Of most relevance to innovation are those that focus on incubators (Australia and the EU) as well as the APPGIE. Innovate UK could be a lead player by supporting virtual and actual incubators for example at Birkbeck, Nottingham and Northumbria Universities.

The report also highlighted the need for continuous evaluation because of the changing landscape of innovation by disabled entrepreneurs. This includes where and how targeted support is available from the public and private sectors.

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Further related literature on innovation and disability

Bailey, S., Carnemolla, P., Loosemore, M., Darcy, S. and Sankaran, S., (2022). A Critical Scoping Review of Disability Employment Research in the Construction Industry: Driving Social Innovation through More Inclusive Pathways to Employment Opportunity. *Buildings*, *12*(12), p.2196

* Innovation research in construction has almost exclusively focused on economic and technological innovation. In contrast, the emerging concept of social innovation has been largely ignored. This is despite the global growth of social procurement policies which incentivize construction firms to innovate in providing employment opportunities for equity-seeking groups. While there is an emerging body of research which is starting to explore innovative employment pathways into construction for certain equity-seeking groups such as women, refugees and Indigenous people, there has been relatively little research into employment pathways for people with a disability.

Barbareschi, G., Zuleima Morgado-Ramirez, D., Holloway, C., Manohar Swaminathan, S., Vashistha, A. and Cutrell, E., (2021). Disability design and innovation in low resource settings: addressing inequality through HCI. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems* (pp. 1-5).

*The workshop was intended to be a call for arms for researchers in HCI to engage with people with disabilities in low resourced settings to understand their needs and design technology that is both accessible and culturally appropriate.

Espada-Chavarria, R., Diaz-Vega, M. and González-Montesino, R.H., 2021. Open innovation for an inclusive labor market for university students with disabilities. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(4), p.217.

* The open innovation process has focused on collaboration to provide accessibility and equity to the procedures of human resources departments for access to employment, that is, external collaboration has been used to offer an equal-opportunity hiring process. The information obtained allows us to conclude that companies need to increase their training and/or knowledge in the fields of diversity and inclusion to eliminate the barriers of access to employment found in hiring processes. This study reveals the importance of this type of open innovation among companies and organizations, not only for establishing diversity-sensitive human resources policies, but also for promoting the talent attraction with equal opportunities and an inclusive labour market.

Ludke, R (2022) Competitive, Integrated Employment: A Driver of Long-Term Value Creation https://harkininstitute.drake.edu/wp-content/uploads/sites/103/2022/06/Harkin-Disability_Inclusion_and_Long_Term_Value_Creation-design_Final-6.6.22.pdf

"A key premise in our work is that investors – through their engagement with boards of directors, CEOs, and c-suite executives on corporate strategy – are focused on ensuring that

companies integrate persons with disabilities throughout their workforce in a way that creates value for shareholders and as well as all stakeholders.

Investors – and all stakeholder groups across society – increasingly are calling on companies they invest in, and interact with, to be transparent on their disability inclusion practices and performance. Through transparency, we foster accountability, improved performance, and advancement that is enduring."

Meacham, H., Cavanagh, J., Shaw, A. and Bartram, T., (2017). Innovation programs at the workplace for workers with an intellectual disability: Two case studies in large Australian organisations. *Personnel Review*, *46*(7), pp.1381-1396

* The key theme here is that "Workplace innovation programs are introduced to workers in the initial stages of employment and aligned to an organisation's values and designed to generate new ideas and methods that better meet the needs of the organisation and individuals (Walsworth and Verma, 2007)" (page 1382).

Record of output of Universal Inclusion & the Inclusive entrepreneur network

HISTORY OF THE NETWORK

- 2012 Piloted the ESF funded Inclusive Entrepreneur Programme - coined the term 'Inclusive Entrepreneurship'
- 2013 Universal Inclusion launch Inclusive Entrepreneur Programme & Network: https://www.universalinclusion.co.uk/the-inclusive-entrepreneur
- 2015 ESF Report – Fluidity Case Study: https://www.universalinclusion.co.uk/images/Docs/Fluidity_case_Study_7157.pdf
- 2017 Raising the Roof - St Georges Hall: https://www.universalinclusion.co.uk/news/articles/raising-the-roof-2017
- 2018 Raising the Roof - St Georges Hall: https://www.universalinclusion.co.uk/news/articles/raising-the-roof-2018
- 2018 Opening up the Creative Space – St Georges Hall: https://www.universalinclusion.co.uk/news/articles/accessibility-in-creative-spaces-a-seminal-gathering-followed-by-a-spectacular-raisingtheroof-concert-sets-the-scene-at-iconic-st-george-s-hall-liverpool
- 2020 The Inclusive Entrepreneur - An Inclusive World – Media City:
- https://youtu.be/gcVCKAmpZoY
- https://www.universalinclusion.co.uk/about/inclusive-entrepreneurship-expo-2020)
- 2020 Network moved online due to Pandemic:
- Friday Briefing: https://youtu.be/C2xhgJat4OE
- RSA Podcast: https://podcasts.apple.com/gb/podcast/rsa-podcast-series-inclusive-entrepreneurs-online-q/id1543256544
- 2020 APPG for Inclusive Entrepreneurship launched: https://www.universalinclusion.co.uk/appgie
- Recognition Awards: https://youtu.be/sK6JXFZhMRM
- Our Year in Westminster: https://youtu.be/q2p4D_TDhQY

ACADEMIC VALIDATION

- Audit Commission Services for Disabled Children & Their Families, 2003
- Ofsted Removing Barriers: A Can-Do Attitude, 2005
- The Work Foundation Fluctuating Conditions Fluctuating Support, 2015
- ESF funded report on Inclusive Entrepreneur Programme 2015
- Solutions for Equality and growth – Citizens Advice 2015
- Ahead of the Arc - a Contribution to Halving the Disability Employment Gap, APPG on Disability, 2016
- Women in Sport - Levelling The Playing Field Report, Farrer & Co, 2019
- Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with #Disabilities, presented during the 9th Int Conference on Business & Economic Development #ICBED 2020

- Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with #Disabilities - Literature Review for Manuscript From Beginning to Presentation
- Keynote Speaker: Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with #Disabilities presented at WOSAM2020, World Summit for #startups, #entrepreneurship& #MSME development, October 2020.
- Co-author: Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with Disabilities - studies the specific challenges in entrepreneurship faced by persons with disabilities - included in the November 2020 edition, volume 8, Issue 02 of The International Journal of Business & Economic Development
- Contributor: MAKING BUSINESS INNOVATION ACCESSIBLE TO DIVERSE GROUPS research study by Helen Lawton Smith and Dina Mansour, and Ayse Seyyide Kaptaner Birbeck University Centre for Innovation Management Research, 2021
- Inclusive Entrepreneur Network Review 2021 https://youtu.be/WHNFc0T8HjM
- Presenter at CIMR Hosts Virtual Diversity and Entrepreneurship Workshop, featured presentation on Inclusive Entrepreneurship, 2021
- SMEs: Research Collaborator with Dr Paula Holland Principal Investigator and Dr Cara Molyneux, Snr Research Associate. Research with small and micro-sized employers on their support needs to recruit and retain disabled workers and people with long-term health conditions. Lancaster University, 2022
- Inclusive Entrepreneurs: Research Collaborator with Dr Paula Holland Principal Investigator and Dr Cara Molyneux, Snr Research Associate. Research explores the support, information and advice available for entrepreneurs/self-employed/small business owners who are disabled or have long-term health conditions. Lancaster University, 2022

2022

- WeGate Summit Brussels – March 2022 https://summit2022.wegate.eu/speakers/
- Inclusive Entrepreneurs: Research Collaborator with Dr Paula Holland Principal Investigator and Dr Cara Molyneux, Snr Research Associate. Research explores the support, information and advice available for entrepreneurs/self-employed/small business owners who are disabled or have long-term health conditions. Lancaster University, 2022
- Research collaborator with Taylor, H, Florisson, R, Wilkes, M & Holland, P. (2022) The changing workplace: Enabling disability-inclusive hybrid working. Work Foundation, Lancaster University.
- Acknowledgement Helen Lawton Smith, CIMR Birkbeck London: Addressing regional inequalities in innovation opportunities for ethnically diverse and disabled entrepreneurs 2022
- Co-author - Navigating serial inequities: disabled workers' experiences of becoming entrepreneurs Sept 2022
- Co-Chair at CIMR Birkbeck London debate Endless possibilities: what roles will universities play in new hybrid ways of creating inclusive entrepreneurship? 2022

- Pre-event Blog for CIMR Birkbeck debate Endless Possibilities: What roles will universities play in new hybrid ways of creating inclusive entrepreneurship? 2022

2021

- Presenter at CIMR Virtual Diversity and Entrepreneurship Workshop, featured presentation on Inclusive Entrepreneurship, 2021
- Contributor: Making Business Innovation Accessible to Diverse Groups, research study by Helen Lawton Smith and Dina Mansour, and Ayse Seyyide Kaptaner Birkbeck University Centre for Innovation Management Research, 2021
- Presentation of Co-Authored Paper during the International Conference & Graduate Colloquium 2021 (ICGC), Pakistan, April 6, 2021
- Presentation and Panel Speaker during a Diversity and Entrepreneurship Workshop organised by the Birkbeck Centre for Innovation Management (CIMR) March 2021
- APPGIE 13.01.21 Health & Well Being Panel https://youtu.be/XGfkxm_K9Zc

2020

- Co-author: Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with Disabilities - studies the specific challenges in entrepreneurship faced by persons with disabilities - included in the November 2020 edition, volume 8, Issue 02 of The International Journal of Business & Economic Development
- Keynote Speaker: Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with #Disabilities presented at WOSAM2020, World Summit for #startups, #entrepreneurship& #MSME development, October 2020.
- Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with #Disabilities, presented during the 9th Int Conference on Business & Economic Development #ICBED 2020
- Inclusive Entrepreneurship: A Critical look at Inclusion of Persons with #Disabilities - Literature Review for Manuscript From Beginning to Presentation
- Co-Presentation of Paper during the CBER-MEC 9th ICBED-2020, Virtual Conference, August 2020
- Building Resilience Beyond COVID19, Webinar presentation for Inclusive Companies June 2020

2019

- Women in Sport - Levelling The Playing Field Report, Farrer & Co, 2019
- GAAC Presentation 2019
- The Key to Economic Empowerment for Women's Minority Groups - Gender Accounting & Accountability Conference, Melbourne 2019
- Windsor Consultations Inclusive Economic Growth 2019

2018

- UN Headquarters New York Presentation, Inclusive Entrepreneurship Key to Reducing Poverty caused by Chronic Pain, 2018
- Windsor Consultations 2018 – Opening Up the Creative Space

2017

- UN Headquarters New York Presentation 2017
- Windsor Consultations Inclusive Economic Growth 2017

2016

- Ahead of the Arc - a Contribution to Halving the Disability Employment Gap, APPG on Disability, 2016
- International Women's Day Westminster - Inclusive Entrepreneurship 2016
- Global Entrepreneurship Week Westminster - Inclusive Economic Growth 2016
- Windsor Consultations Inclusive Economic Growth 2016

2015

- The Work Foundation Fluctuating Conditions Fluctuating Support, 2015
- Solutions for Equality and growth – Citizens Advice 2015
- ESF funded report on Inclusive Entrepreneur Programme
- Windsor Consultations Inclusive Economic Growth 2015

APPENDIX B: A systematic review of the academic literature

Laurel Edmunds

Summary

The purpose of this part of the review was to provide an evidence base for the research conducted with innovative entrepreneurs with disabilities (EWDs). The approach with the academic literature was to adopt a systematic review process. Databases (Scopus and Web of Science) were searched (using the terms disab* and entrep* (innovate* was trialled in addition but only resulted in 87 hits)) up to February 2023 and identified over 512 papers. These were reduced to include empirical studies, rather than opinion pieces and overviews, as these would provide the best evidence of the experiences and needs of EWDs (n = 157). These further subdivided to include papers from North America, Europe and Australia (n = 67) purely on the basis of making the review manageable within the timeframe, funding and relevance to the UK context. This was not to devalue studies from other countries which have been included as a table with abstracts, where their findings appear to map onto those of the included studies.

Rather than a lack of research, the research studies identified here were very idiosyncratic and so theming studies in an evidence-based way was difficult and the first level of categorisation was based mainly on methods: the split between quantitative and qualitative papers was approximately half and half. Categorisation was pragmatic after this. Two studies from Spain accounted for 22 papers and were the most thorough analyses in the review (and most similar to the proposed study in this project). Quantitative topics included formal national surveys and questionnaires conducted across countries, while qualitative studies included reasons and challenges for EWDs, psychosocial aspects and EWDs with intellectual disabilities.

The following is a brief summary of general findings from the evidence sampled.

Where the topic arose, EWDs tended to think of themselves as entrepreneurs first and disabled second. Most were sole traders and worked in the service industries. They reported preferring the playing field to be levelled so that they could compete on an equal footing (rather than being treated differently in some advantageous way). It was suggested that being an EWD could be normalised to raise their visibility and provide role models. Given that disabilities were many and varied, it was thought very important to include EWD voices, either singly or as organisations, about how they wanted to be supported when developing policies or programmes.

Positivity: Having or acquiring a disability could be perceived as a positive. It gave some EWDs credibility, expertise and understanding in their chosen businesses. For some, it also gave them the motivation to set up a new business, or an opportunity to do something different, or in a different way, be innovative and meet the challenges they set themselves. Not only was having a positive attitude perceived as beneficial, so was improving self-esteem, self-efficacy and self-confidence. Improving these attributes also promoted a sense of achievement and purpose, and less reliance on others (family, friends, and supporters). This potentially

could translate into improved health, wellbeing and reduced input from health practitioners, but this was not reported upon probably because it would be difficult to assess and would require longitudinal research methods.

Financial considerations: EWDs were unlikely to earn more than employed people with disabilities, but owning a business did have greater non-financial benefits (such as improved sense self-confidence, of achievement, social inclusion, flexibility in how, when, where to work and at what). In countries with social support, an artificial ceiling could be imposed on the earnings of EWDs due to the chance of losing state benefits (this was less true in the US). They often started from a smaller business base for the following reasons: greater personal expenses, fewer personal assets, less able to borrow money/acquire grants. Their businesses took longer to establish and grow, which would have also been influenced by how much time they could work (either due to their health, or the benefits trap, or other demands on their time). Where grants were available, EWDs were concerned about their management, i.e. the additional administration (and the time they were losing from their business), the monitoring by the funding body and the meeting of milestones to maintain the grant. These concerns were great enough for some EWDs to reject the use of such grants. However one study showed the potential benefits of evaluating a publicly funded business to include wider social impacts. Authors devised a method to monetise the financial benefits and softer outcomes (mainly community spread and not the psychological/ health outcomes) of a social enterprise business (14 EWDs with intellectual disabilities in a co-operative) where analyses showed that for every Euro of public funding, the enterprise generated at least 5 Euros in the community (Barba-Sanchez, Salinero and Estevez, 2021).

Most surveys used descriptors such as gender and ethnicity etc. which informed comparisons across the samples where authors chose to report them. These comparisons were appropriate in national surveys and larger questionnaire based studies, but in smaller studies, the numbers would not have been sufficient for meaningful statistical analyses. The larger studies revealed some general patterns such as the percentage of self-employed EWDs was greater than the percentage of self-employed people without disabilities, EWDs earned less than the employed, and women EWDs earned less than male EWDs. Many EWDs became entrepreneurial out of necessity. Those EWDs with higher levels of education earned more and those from ethnic minorities tended to earn less (this may have been a reflection of the studies being based in predominantly Caucasian countries). It is difficult to know if these patterns have changed over time as there was quite a long time lag between the national survey data collection and papers being published – data included here was from surveys conducted between 1995 and 2015.

Four surveys reported gender differences. In addition to female EWDs earning less in Canada, female EWDs in Spain and the UK typically became entrepreneurs less often, earnt less, had less access to funding, for example, and performed slightly less well on other beneficial aspects and were affected to a greater extent on the negative aspects of running a business than male EWDs. Women EWDs had more positive reasons for becoming EWDs in the UK, and in Sweden, although they supported themselves to a lesser extent, they performed on most other aspects as well as men EWDs. In a US survey female EWDs were represented to approximately the same extent across ethnic groups whereas there were differences in male EWDs.

Ethnicity was only commented upon in two surveys. In the UK, ethnic minority male EWDs were even more likely to be self-employed, and ethnic minority women with disabilities were less likely to be employed or self-employed. The US survey compared the earnings of male EWDs of different ethnicities where Caucasians earned most, then Asians, then African American (women EWDs earned similar amounts as African American male EWDs). However, African American men with disabilities were less likely to be entrepreneurial compared with other ethnicities.

Education showed a positive relationship with entrepreneurship and employment for women, but only with employment for men in the UK survey. In Spain, those with lower levels of education were more likely to start a business out of necessity. More education was associated with higher earnings in the Canadian survey, whereas higher levels of education in the US were more likely to be employed. Formal education gave people with disabilities greater choice about their employment and was reported as key to improving the lot of EWDs. More education, in the form of training courses and programmes were frequently recommended. In the national surveys, authors pointed out, that from a demographic perspective, encouraging innovative entrepreneurship would benefit countries as a whole, but even more so as populations age and the number of people with disabilities increases. The general opinion was that these courses and programmes to promote/support EWDs should address strengthening psychological aspects that support entrepreneurialism as well as educating participants with regard to business functioning, law and tax, provide mentoring and networking opportunities. Such courses/ programmes would also need to be well publicised to attract participants, as currently, the internet tended to be the primary source of information. Some of the interview studies also commented on the need for trainers in such settings to be trained themselves to understand the challenges and benefits of having a disability(ies) in relation to entrepreneurship, and that self-employment/entrepreneurship should be included in employment options as a matter of course.

Existing programmes were described/evaluated using a wide variety of methods and were not reported in a systematic way and so comparisons were not possible. However, the reports were invariably positive, possibly due to a publication bias, and were perceived as cost effective when this was mentioned. The association of a university was also thought to be beneficial. Given the number of programmes that are available for disabled people wanting to become self-employed/entrepreneurs (e.g. the US military veterans programmes), it is surprising that only eight studies were identified. Therefore such programmes either are not evaluated, any evaluations are not written up as academic studies, or these exist as government reports, or in the grey literature.

The relationship between age and entrepreneurship was more complicated. There was a general positive relationship, but when analysed more closely, an inverse U-shape relationship was found, i.e. there were fewer younger and older EWDs. There was a suggestion that earnings tracked this pattern in that younger and older EWDs tended to earn less. Similarly, middle-aged EWDs were more likely to run businesses that employed others compared with the younger and older EWDs. Age also interacted with other factors such as education, experience, the acquisition of assets and the deterioration of health. Authors of the Canadian survey point out that there is little research that examines the impacts of age; for example the age at onset of the disability as there is some evidence to suggest that businesses set up

by older EWDs tend to be more successful than those set up by younger EWDs; given that the likelihood of disability increases with age, and retirement age is increasing, what is the best way to support EWDs who want/need to continue working; also there is little research on children with disabilities and how to foster their entrepreneurial aspirations.

Types of disability were not often separated out in entrepreneurial terms with two exceptions, intellectual disability and ADHD. The research conducted with EWDs with intellectual challenges may provide a useful basis of understanding of all the challenges and benefits of setting up businesses for EWDs, if not entrepreneurs generally, in that it tended to include the views of carers and different types of stakeholder professionals in addition to the focal participants– providing a '360' perspective. Those with ADHD were even more likely to become entrepreneurs as they expressed many beneficial characteristics. They tended to be impulsive resulting in frequent decisions based on experience driven by impatience and novelty seeking. Consequently, they could be productive in uncertainty and exhibited higher activity and energy levels.

The general belief that research concerning people with disabilities and entrepreneurship is limited was not borne out by this review. Methods of restricting studies were employed to make the review manageable within the time frame – this is a burgeoning area globally and deserving of a broader approach than the one adopted here. There is an issue of lack of details in published studies, consequently there are likely to be missed opportunities of maximizing the information, particularly at the intersections of for example (apart from one study Owalla et al., 2022), gender, ethnicity and geographical locality. There was little consistency about the topics covered in the studies with the possible exception of psychological aspects of entrepreneurs personalities. A notable omission was the examination of financial successes. Only one study (described above) included hard and softer outcomes, and even they stated that they omitted psychosocial and potential health impacts because they are difficult to assess financially. Is this because most researchers in the area are not necessarily interested in reporting harder financial outcomes over softer ones such as personal benefits? Or does entrepreneurship by people with disabilities not attract the funding/researchers who could undertake a more comprehensive economic analyses?

Introduction

This review supported the project funded by Innovate UK that investigated the entrepreneurship of people with disabilities in the UK from September 2022 to April 2023. The main part of the study included an online questionnaire and focus groups to collect data. To support the empirical data, this review was restricted to studies of similar data that would help contextualise this UK study and its findings. Therefore, the purpose here is to review the global academic literature (global focus) and while the grey literature had a primary UK focus, (Appendix A). The literature review aims to provide a critique of what is known and identify gaps. It will also summarise in each section what concepts have been used in explaining what is happening, what is missing and why. However, this will depend on the nature of research that has been conducted and what has been published. This academic literature review is focused on research conducted with innovative entrepreneurs with disabilities (EWDs).

There is a common belief that there is a paucity of research which considers disability and entrepreneurship (Williams and Patterson, 2019). Most research studies have been published relatively recently. In a systematic review of empirical studies Mota, Marques and Sacramento (2020) found 25 of their 45 included studies were published in 2019 with the majority based in the UK and the US (Mota, Marques and Sacramento, 2020). The proliferation of studies in 2019 can be accounted for to some extent by two journals running special editions centred around EWDs in addition to the growing interest in this topic generally.

The searches conducted for this review in late 2022 and early 2023 found that a large number of empirical studies were based all across the world. There were also 12 reviews (not including the reviews typically written to contextualise research work carried out by all authors), numerous opinion pieces and overviews. It is very likely that a thorough categorisation of all empirical studies from reviews, papers as well as the literature searches, would result in even more studies that could have been included here. To accommodate the amount of academic literature found, an evidence-based approach to reviewing studies systematically has been adopted and followed that of the Cochrane Collaboration for establishing evidence bases for health conditions (including constructing the PRISMA flow chart). This presents data in accessible, pragmatic categories as an initial analysis to summarise as much as possible. Ideally a secondary analysis would have been conducted to synthesise the data into the areas of interest to Innovate UK. At present, these are included throughout the review and so in an attempt to address this, the executive summary uses these areas of interest to structure the findings, rather than using the structure of the review.

Methods

The review adopted a systematic review process such as the Cochran Collaboration in the initial stages (Cochrane Handbook for Systematic Reviews of Interventions, Higgins et al., 2019). This was to ensure a thorough search and selection process.

Databases included Web of Science and Scopus, in keeping with similar reviews in this field, and were searched across all years, on the 18th to 20th of October, 2022. (This was repeated on 6th February 2023 to capture publications during the period of the project, however no further papers fitting the criteria were found.) The search terms were restricted to English using "disab*" AND "entrepren* to provide a broad basis via which to capture as many relevant articles as possible. Initial searches also included "innovate*" but this term reduced the number of hits and so was dropped so that the maximum number of hits could be captured. (This was also repeated in Google Scholar, but it resulted in 20,900 hits and was considered impractical to include). A flow diagram of articles found and excluded at different stages can be seen in Fig. 1 Flow chart showing article selection.

Additionally, recent relevant reviews (n = 12, see Table x) were examined for any articles that were not identified in the original searches. Google Scholar was searched using the terms "disab*" AND "entrepren* AND "self-employ*" AND "systematic-review" from 2021. This resulted in another two reviews (Iacomini and Munez).

Inclusion criteria

Articles describing people with disabilities becoming entrepreneurs, or sustaining businesses. We also included are articles describing practical help, needs, barriers, regional differences at both the level of the individual and sector.

Exclusion criteria

Articles considering supporting disabled employment, BAME, LGBTQ, refugee, offenders entrepreneurship, were not included unless the articles considered subjects also had disabilities. We also excluded opinion pieces, references that did not appear in Google Scholar, reviews, book chapters, theses, conference posters and books, or articles that restricted their circumstances to within the Covid-19 pandemic. A pragmatic decision was made to focus on articles sharing a context similar to the UK (North America and Europe), purely on the basis of reducing the number of included studies to make the review manageable given the timeframe for the project. We found many valuable studies from around the world that are deserving of their own review.

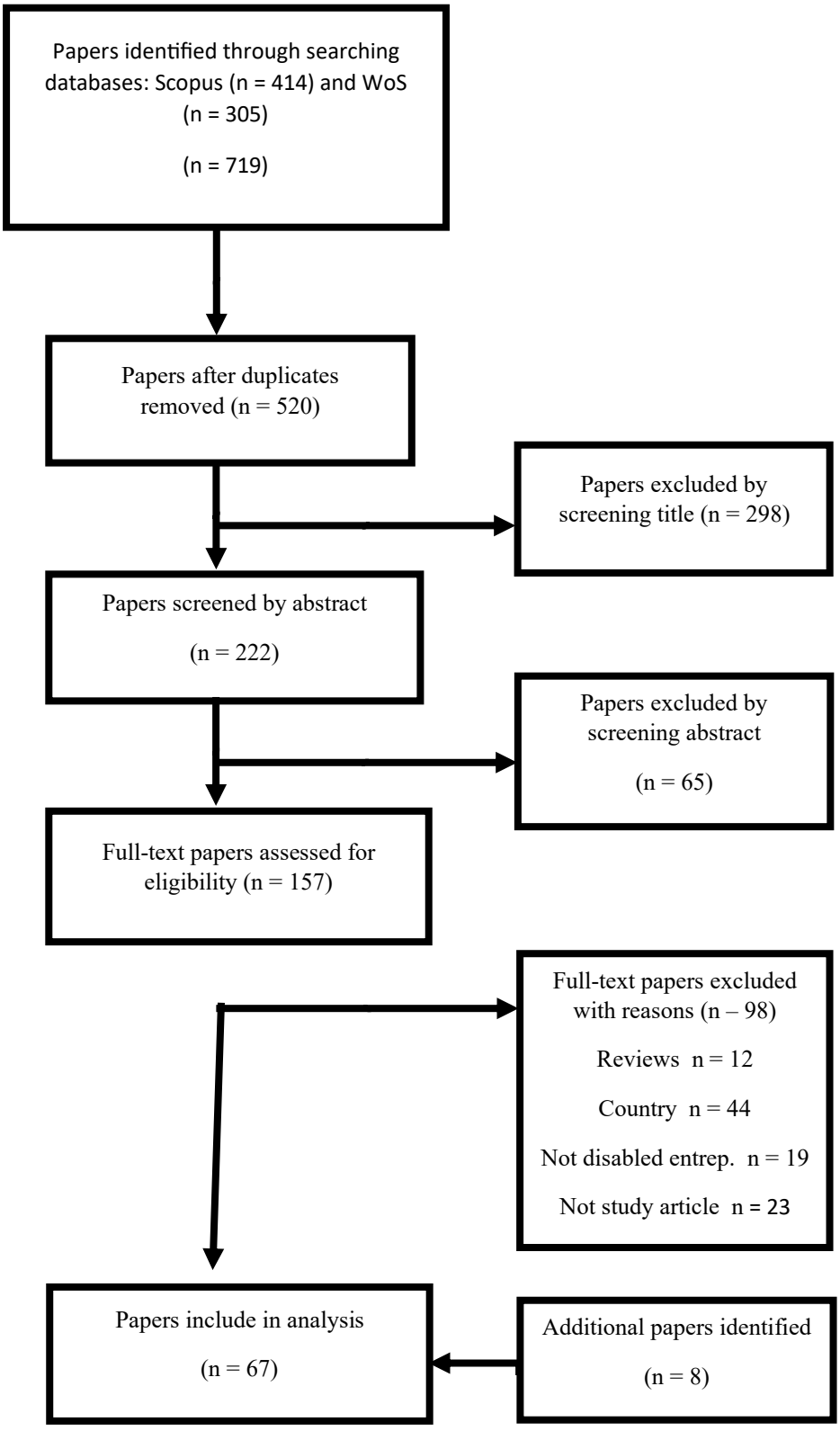

Figure B1: Flow chart of papers

Results

The approach taken here is pragmatic due to the variety of methodologies, participants, countries and topics under investigation. The initial part of the results considers programmes as an overview of published papers evaluating what approaches have been tried. This is followed by a series of papers from Spain, partly because they form a natural group (they are derived from a survey and a qualitative study) and partly because the researchers here have conducted similar inquiries to those proposed by the Innovate UK research project. Other quantitative based studies form the next group and then the qualitative studies.

Programme evaluations

Programmes have been separated out regardless of the research methods used in their reporting as these are effectively 'evaluations of interventions'. As such authors have used a variety of questionnaires, interviews, mixed methods and case studies to describe a wide range of programmes. This group comprises eight studies – six from the US, one from Canada and one looking at research needs across Europe.

Two of the US 'StartUP' demonstration projects funded by the Office of Disability Employment Programs were evaluate. Each project set out its own targets and outcomes. Shaheen (2016) evaluated StartUP NY and Heath, Ward and Reed (2013) evaluated StartUP Alaska. StartUP NY aimed to train 150 people and to help at least 30 to start businesses, accepting that these may be part-time either due to owners needing to build up slowly, not wanting to jeopardise benefits or the demands of a full-time business. The first stage was resource mapping, i.e. identify loci of support and information (e.g. a Small Business Development Center, the Syracuse University South Side Innovation Center and others) and via interviews, people with disabilities were not perceived as self-employment or business owners. These challenges were addressed in Year 1 so that potential EWDs could access training and support. At the end of the 3-year project, over 200 had been trained and over 70 businesses had been started and further government funding was available so that the project could continue. The benefits included starting with a realistic self-assessment, motivations and research before devising a business plan. The support side had to adapt to accommodate the needs of the potential EWDs (e.g. counselling, financial literacy classes). The most popular feature was the monthly networking lunches for peer support and information dissemination. The final project report showed that as well as many with feasibility and business plans, 65 had registered a business and 48 were generating an income ($5-6 000 on average per month). Because the project was person-centred, it worked effectively for those with psychiatric disabilities as well as those with physical ones. The evaluation showed how this project could be replicated across the US and in other countries (Shaheen, 2016).

The second, StartUP Alaska (Heath Ward and Reed, 2013) included 71 participants, 33 of whom set up a business within the 4-year project (no further funding was obtained). The key components were identified as a dedicated self-employment facilitator, discovery (identify an individual's connections and supports, skills and interests), access to virtual business incubator and business plan development. There was one-to-one facilitation followed by the virtual business incubator (monthly training meetings) with additional support via phone and online. The facilitators were themselves trained by the organisation overseeing all the StartUP sites.

The training for the customised self-employment and the development of StartUP Alaska meant that it was three years before the project was fully functional, i.e. the local facilitators were implementing the individualised Discovery process. Early joiners did not receive the discovery process and fewer of these participants launched a business. The aim of the original funding was to develop a model and so many outcomes were not followed up (Heath Ward and Reed, 2013). [The Discovery process was one of three foundation elements of the StartUP NY project.]

Another Alaskan study (Heath and Reed, 2013) used the Industry-Driven Support (IDS) model to build social capital and business skills in low-income EWDs. This model evolved from the StartUP Alaska project and was specifically aimed at those who were interested in setting up arts and crafts, or service businesses. An important element of this study was the delivery via the internet so that geographical location of participants was not an issue. The IDS model was built around weekly 2-hour sessions that ran for six weeks, alternating between business knowledge and networking, and supported by one-to-one facilitation. This was developed over two years via an iterative action research approach and was still being developed at the time of publication. Comments from participants described increased sense of purpose, re-starting businesses, increasing social capital and support/knowledge. However, income change was not reported upon, but it was deemed a cost effective way of delivering training that were relevant for these EWDs. (Heath and Reed, 2013).

Outcomes from a South-Eastern US based Entrepreneurship Bootcamp for Veterans were described using case studies (Blass and Ketchen, 2014; Blass was the director of the EBV programme at Florida State University from 2008). Participants develop an idea for a business and get a year's free support. The case studies illustrate why a business worked for one person and a similar business did not for another. Based on their experiences they surmised that successful businesses were based on sustainable business models, leveraged entrepreneurs' unique experiences and attributes, and were built around a process or system that enabled venture to prosper even if entrepreneurs leave the ventures.

Another paper that used case studies to illustrate effectiveness of a programme, the Chicago Add Us In (AUI) (Balcazar et al., 2014). Emphasis was placed on getting all the background consortium players aligned before the start of the programme roll out and to maintain good relationships. Again this programme included a business plan course, one-to-one business mentoring, technical assistance, start-up business grants and assistance from a business incubator. Participants received a $5000 grant on completion of the business plan. They concluded that the programme facilitated relationships between the consortium and wider, the participants and wider, and was still evolving at the time of publication despite the challenges from the 'service delivery' level.

The last US study concerned and outcome evaluation of microenterprises with 27 entrepreneurs with intellectual disabilities and their support workers (Convoy, Irvine and Ferris, 2010). The evaluations were 'then and now' measures and focused on quality of life. The work-life outcomes were positive as participants were significantly less bored and reported improved happiness about work and self-pride. Owning a microenterprise made working conditions better for the supporters too. Earnings were also considered. There was an increase in entrepreneurial efforts increased and the earnings from workshops decreased

(especially sheltered ones) but overall, the total level did not change. However, as this sample size is very small it is not possible to draw confident conclusions based on statistical analysis about levels of earnings, but it is clear that microenterprises for this group of EWDs was beneficial.

The most complicated study (testing eight hypotheses to devise a new model) was a comparison of self-employed people with disabilities who participated in Canadian training programmes and those who did not participate (Martin and Honig, 2019). The outcomes were assessed before and after the training (12 months) and looked at their potential for improving self-esteem and self-efficacy. Their aim was to identify how to help people with disabilities who had been vocationally unsuccessful to become self-employed. A positive and significant relationship was found between start-up activity and training and self-efficacy. They also found a positive relationship between self-image and starting a business, which could additionally be used to predict success, and self-image is more malleable and people with disabilities are likely exposed to more setbacks, so improving this rather than more stable self-evaluations, could be useful. Training was beneficial in a more generalised way in terms of improving self-esteem and decreasing self-deprecation regardless of whether a business was started.

The European study was different in that its focus was on a survey of Disabled People's Organisations (DPOs) (Priestley, Waddington and Bezzori, 2010). They were interested in potential funding opportunities for research and to identify the needs of potential disable people generally. The most frequently mentioned targets for research by the DPOs were education, mainstreaming disability in policy and non-discrimination and human rights.

Employment was mentioned but not prioritised. The research topics suggested by the DPOs were: (see box below)

1. Research on accessibility and solutions for labour market participation (for all forms of impairment) including designed for all workplaces.
2. Comparative research on the employment of research of disabled people, including statistical data concerning different types of impairment, and on accommodation in the workplace.
3. Comparative analysis of the impact of existing employment legislation on disabled worker's rights and their maintenance in employment.
4. Research on the impact of unemployment on disabled people.
5. Research on disabled people as employers (e.g. personal assistants)

This research was conducted in 2008/2009 and clearly European DPOs at that time were not concerned with disabled people becoming entrepreneurs or self-employed.

Given the number of programmes that are available for disabled people wanting to become self-employed/entrepreneurs (e.g. the US military veterans programmes), it is surprising that only eight studies were identified. Therefore, such programmes either are not evaluated, any evaluations are not written up as academic studies, or these exist as government reports, or in the grey literature.

Table B1: Studies describing programmes

Authors	Subjects	Focus of study	Findings	Recommendations
Balcazar, 2014 US Chicago This paper is how to help not experiences of disabled	3, case studies 0 women	Business model course (from Chicago AUI), help with business and then funding, case studies	Overview of how the programme was set up and the strong relationships that allowed it to function. 1 Relationship building is key to working with consortium i.e. interventionists and UIC University of Illinois, Chicago 2UIC has facilitative and flexible leadership style 3Provides new employment option 4AUI had to find new way to work with Dept. for Rehabilitation Services to promote efficacy: trusting relationships, insightful analysis of data, wanting to improve and find effective solutions	
Blass, 2014 US	Examples of who succeeded and who did not	Entrepreneurship bootcamp for veterans with disabilities (EBV) program	Successful businesses are 1: based on a sustainable business model, 2: leverage the entrepreneur's unique experiences and attributes, 3: are built around a process or system that enables the venture to prosper even if the entrepreneur leaves the venture	
Conroy, 2010 US Michigan	27 with intellectual disabilities, 13 women, ages 23-61 years (median 33) also with secondary disabilities	Microenterprises Qualities of work life then and now scale. Two scales: one for microentreps. And one for supporters. Questionnaires	Participants were significantly less bored, improved happiness about work and self-pride. Hours in supported and/or sheltered employment dropped very significantly. Microcenters made working conditions better for the supporters too. Although total earnings over all sources of income for the participants as did not increase, they did not decrease either – and the quality of work life outcomes were dramatic and positive.	Microenterprises are a viable alternative for those with intellectual disabilities.
Heath, 2013 US Alaska	38 low-income entrepreneurs with disabilities (Arts and crafts/ services) 24 women, 23-66 years	Industry-Driven Support (IDS) model, increase skills for low income businesses; training, networking, support. Internet based.	Cost-effective method for delivering training, providing needed supports, and connecting low-income entrepreneurs with disabilities to each other and needed resources. Social benefits. Entrepreneurs feeling more purposeful and with clearer goals.	

Authors	Subjects	Focus of study	Findings	Recommendations
		Participatory Action Research over 2 years		
Heath, 2013b US Alaska	71 disabled people self-employed or wanting to be, 29 women, 40-59 years, 62% had at least secondary educ. 18 had additional paid employment	Start-up Alaska project (4 years) - identify promising practices in the self-employment realm. Role of Discovery. Interviews, conversations, and observations.	Most salient components of the StartUp Alaska model: dedicated self-employment facilitator, Discovery (identify an individual's connections and supports, skills and interests), access to virtual business incubator, and business plan development. Discovery process: each individual to determine his or her "ideal conditions of employment, learning characteristics, interests, preferences, contributions, task competence, and support needs.	Business Planning, and Virtual Incubator
Martin, 2020 Canada	304 (155 from training group, 149, non-training at T1; +12 months at T2, 91 in training, 88 in non-training group. Vocationally unsuccessful or unemployed with a variety of disabilities	Model development, self-esteem, generalized self-efficacy, and perceived stigma—as dependent variables, survey-based, longitudinal data	Training programmes were based on latest self-employment training, but instructors and environments were disability friendly. Relationship between self-image and starting up a business was positive such that self-image can be used as a predictor of business success. Creating a business improves self-image. Start-up activity had a direct significant effect on self-efficacy (and reduces self-deprecation/stigma). Small initial tasks in setting up a business can build sense of accomplishment and are important. (Self-image is malleable and people with disabilities are likely exposed to more setbacks, so improving this rather than more stable self-evaluations, could be useful.	Improving these psychological aspects can be a way forward in training. Health and wellbeing may also show improvements from this approach.
Priestly, Europe	68 organisations in 25 countries 21 research topics	European Research Agendas for Disability Equality' (EuRADE) European-level research funding for EWDs Action research	The findings demonstrate the potential for mainstreaming and targeting disability issues in research that will have an impact on the lives of Europe's 65 million disabled people, using social model and rights-based approaches. They also demonstrate how effective partnership between academia and activism adds to the social relevance and impact of research practice.	
Shaheen, 2016	Programme	Start-up NY (3 years) programme to assist	Office of Disability Employment Programs 48 operating businesses: 19 owned by women.	Articulate the mission and vision

Authors	Subjects	Focus of study	Findings	Recommendations
US NY	204 started mix of disabilities, 143 at +3 years	people with disabilities to become self-employed Comprehensive evaluation	important to address the motivational "upstream from self-employment	Obtain sponsor leadership buy-in Identify and convene key stakeholders Elect a skilled convener Map resources, barriers, and facilitators Develop a consensus-driven plan Market the mission Evaluate outcomes Sustain the effort Disseminate and replicate

Two Studies from Spain

The majority of these papers were identified from special editions of Suma De Negocios and the Journal of Entrepreneurial Education published in 2019. These contain empirical data from two studies conducted at the University of Murcia. Treating these as separate papers would bias the findings as they contributed 22/67 papers (32%) and so they have been grouped together (see Table x: Survey study from Spain; Table x: Interview Study from Spain). Given the research activity of these groups, there may be relevant papers published in Spanish that are beyond the scope of this review.

A key aspect of studies generally were the psychological considerations for EWDs and so to illustrate these, a table based on a number of European studies has been included here.

Table B2: Psychological aspects that limit the entrepreneurship of a person with a disability

Group 1: aspects, derived from the disability itself	Slowness in learning Difficulties of understanding Limited capacities Physical and psychic tiredness	Depression Low mood Need for help from other people for day to day
Group 2. Internal psychological aspects. Subjective mental barriers	Low self-esteem Lack of security and self-confidence and in their own abilities Fear to fail	Lack of motivation Insecurities about what they will say Fear of leaving the comfort zone
Group 3. Psychological aspects related to entrepreneurship	Limited aspirations Little entrepreneurial initiative Lack of a clear business idea and ability to have it Difficulties in developing a business idea Unrealistic perception of business projects Difficulties in identifying a business opportunity Difficulties in committing to supporting infrastructures Lack of specific business skills and competencies	
Group 4. Psychological aspects related to the social environment	Family overprotection Absence of external stimuli Difficulties in accessing an initial capital Difficulty accessing information sources Lack of support services Discrimination by clients or consumers Lack of empathy and social understanding Stereotyped vision of society with respect to the collective	

Source: cited in Avilés-Hernandez, 2019, based on a number of European sources.

Survey Study

The first was a survey (papers n = 12) conducted in November and December of 2018, and resulted in 244 responses from those with physical, sensory, or organic disabilities, aged 18-64 years from across Spain. The questionnaire was developed by Barba Sanchez et al. (Barba-Sánchez, V., Ortíz-García, P., & Olaz-Capitán, A., 2019) and sort answers to the following research questions:

RQ1: Does the type of disability influence the entrepreneurial competencies of people with disabilities?

RQ2: Does gender determine the relationship between entrepreneurial competencies and the entrepreneurial intention of people with disabilities?

RQ3: Does age condition entrepreneurial behaviour of people with disabilities?

RQ4: Is training on entrepreneurship a decisive variable of entrepreneurial intention among people with disabilities?

RQ5: Does labour and professional situation condition the entrepreneurial behaviour of people with disabilities? What type of entrepreneurship predominates among PWD: entrepreneurship out of need or out of the opportunity?

RQ6: Is the social competence of people with disabilities a precedent or a consequence of entrepreneurial behaviour?

RQ7: What are the key factors which determine the entrepreneurial behaviour of people with disabilities and what are the moderating elements?

RQ8: Once the company is launched, do people with disabilities have distinctive competencies?

The 12 papers focus on two main areas, descriptive analyses based on factors such as age, gender, education and secondly differences in types of psychological and social competences.

There are general descriptions of the briefly were 60.1% were women, 42.7% were aged between 35 and 50 years, 53.9% had a university and vocational training of higher degree, 47.2% lived with relatives or as a couple, 20.5% had a hearing disability and 20.1% had more than one disability. Their employment status was as follows: 27 (12.1%) had a current business, 48 (21.4%) had given up a business, 42 (18.8%) intended to start one, 61 (27.2%) were not interested in having a business and 24 (10.7%) considered their disability precluded them from having one. Ownership was similarly, individual (41.4%) and shared (44.3%) (Garcia-Palma and Molina, 2019). The age of the businesses varied but 77.8% had been in place for more than 42 months. Of these, 37.0% were sole traders, 37.0% had fewer than three employees and 25.9% had more than three. Businesses that provided services were far more frequent (87%) than the other type of business, construction (13%) (Navarro and Martinez, 2019). The main reasons given for setting up businesses were bettering my personal income 40 (33.9%), increasing my personal independence 36 (30.5%), achieving a personal challenge 32 (27.1%) and reaching social recognition 7 (5.9%) (Garcia-Palma & Molina, 2019). Necessity was also a

motivating factor (67.9%) and their reasons for not creating a business were mainly lack of economic resources and doubts about business profitability (Navarro and Martinez, 2019; Olaz-Capitan and Ortiz-Garcia (2019a). Olaz-Capitan and Ortiz-Garcia (2019a) also pointed out that optimism was necessary to want to start a business initially and if this was lacking, along with fear of low profits and little stimulus from the people/environment, They also stated that EWDs who are in business due to need would be likely to need more support than those who act from opportunity.

Ortiz-García and Olaz-Capitán, (2019a) examined the survey data from a gender perspective. However, the small numbers, either in the absolute percentages or the 5-point Likert scale reported make it difficult to interpret whether the observed differences were significant (this applies to most of the sub-analyses). For example, fewer women were found to start-up businesses than men (14% vs 16.9%). 41.3% do not have a business or intend to start one (vs 23.9% men). The reasons for their not becoming entrepreneurs were: lack of economic resources (3.98; vs men 4.20), uncertainty about business profitability women (3.59, vs men 4.27), and lack of institutional support women (3.77). Women tended to develop a business out of necessity 51.7% and of these, 71.8% were self-employed. There were no substantial disparities in relation to business ownership, size, age, or type of activity, and results for not having family support, lack of training and lack of self-confidence were similar in both genders (Ortiz-García and Olaz-Capitán, 2019a).

Perez and Avilés-Hernandez (2019) considered age as a focus for entrepreneurship using the categories under 35 years of age (11.1% had businesses), 35-50 years (51.9%), over 50 years (37.0%). These results are statistically significant. When grouped together, those who do not wish to be economically active or who had left a business, the comparable results were under 35 years of age (17.4%), 35-50 years (40.4%), over 50 years (42.2%) showing an increase with age. Their main reasons for not wanting to create a business were; in the under 35s - lack of resources (34.2%) and doubts about the profitability of the business (28.9%); in the 35-50 years group - lack of economic resources (22.4%) and doubts about the profitability (21.1%); in the 50+ years group - lack of institutional support (20.3%) and lack of economic resources (17.2%). The majority of under 35s are sole traders in the service industry. Reasons for their entrepreneurship were: under 35 years to achieve a personal challenge (36.4%) and increased independence (27.3%); 35 to 50 years was to increase personal income (36.7%) and independence (30.6%); and the over 50s were similar with 39.1% and 30.4% respectively. Lack of profitability was the primary reason for abandoning a business regardless of age (Perez and Avilés-Hernandez, 2019).

Manzanera-Roman and Senan (2019) focused on type of disability and found that those with osteoarticular system disabilities were most entrepreneurial with almost 60% having launched a business at some point (28.6% have a current business, 28.6% had a business, but had abandoned it). Of those who were visually impaired, 14.3% were entrepreneurial, and 15.2% of hearing impaired were, perhaps because they found paid employment more readily. Those with neuromuscular system disabilities considered that their impairments precluded them from economic activities (23.1%). Similarly as above, reasons for not wanting to start a business were dominated by social factors (lack of support, economic resources and profitability doubts) rather than personal factors (confidence in own abilities, training) (Manzanera-Roman and Senan, 2019).

Escribano and Jimenez (2019) looked at the impact of education on the data set. Briefly, the higher the educational attainment, the more likely they were to be entrepreneurs: education up to 16 and 18/intermediate vocational training, both around 33% whereas nearly 44% of those with university/higher vocational training were entrepreneurs. Fewer in the higher categories of education were frustrated about not being economically active. Those with more education were scored training as a lower need and they were able to set up businesses opportunistically (university 43.8% vs junior high 25%) compared with those with lower levels who typically started a business out of necessity (university 51.6% vs junior high 59.4%) (Escribano and Jimenez, 2019).

A further six papers considered various psychological aspects of being, or aspiring to be an entrepreneur with disabilities. In brief, prospective, or entrepreneurs with disabilities perceived their social competences as high or very high (Llorett and Banon, 2019). Findings also showed that self-confidence, appreciating the needs of clients, conflict resolution, team building and being persuasive were recognized as necessary attributes and skills. Approximately half of those asked, had no training but had learnt through conducting their businesses. External factors such as lack of resources, doubts about profitability, training and institutional support were perceived as greater hindrances to entrepreneurship (Casado and Casau, 2019a). A later analyses of these data found that there were significant differences in the competences of entrepreneurs and non-entrepreneurs, the former scoring high on self-control, optimism and catalysing change (Ortiz-García and Olaz-Capitán, 2021). Olmedo-Cifuentes and Martinez-Leon (2109) also compared characteristic between non- and entrepreneurs. They found the entrepreneurs scored significantly higher in encouraging change in the organization, managing conflicts/negotiations, perceiving the development needs of others and inspiring the personal growth of other, but teamwork and persuasiveness were not significant (Olmedo-Cifuentes and Martinez-Leon, 2019). The decision to launch a business was influenced the self-management competencies of transparency, initiative and optimism (Lopez-Filipe and Valera, 2019). Optimism was also found to be important when considering starting a business with the suggestions that those setting up businesses due to need are likely to require more support than those who set them up opportunistically (Ortiz-García and Olaz-Capitán, 2019).

Table B3: Survey study from Spain

Author	N	Topic	Results	Recommendations
Casado, 2019a	244	Psychological influences and factors affecting entrepreneurship	Self- awareness: lack of economic resources (72.97%-80%) > lack of institutional support (64.86%) > doubts about the profitability of the business (56.81%-62.16%) > lack of training (47.5%-50%)	To develop training actions on those entrepreneurial competencies which promote the proactive attitude of people with disabilities as a collective. • To develop institutional actions that favour entrepreneurship of such collective through economic aid or financing resources
Escribano, 2019	244	Level of education and entrepreneurship	Higher ed>standard education Barriers (scale 1-5 (5 high)) "lack of economic resources" (4.0); "doubts about the profitability of the business" ($\bar{3}$.8); "lack of institutional support from the administration, either national or regional" (3.7). "lack of confidence in their abilities" (2.7); "lack of stimuli in the immediate environment (family, friends, associations)" and "training deficiencies" (both 2.8) Those with lower levels of ed are more likely to start a business out of necessity. Near equal opportunities with opportunistic business creation for graduates.	Better training means that they do not make the decision to launch a business because they lack better options in the labour market, but rather because they perceive business opportunities which have not been used by existing companies
Garcia-Palma, 2019	244	Descriptive analysis	Yes, I have a business 27 (12.1%) . No, but I have the intention to have one 42 (18.8%) Yes, I have had one but I gave it up 48 (21.4%) Neither have I had one, nor do I intend to have one, for I am not interested in it. 61 (27.2%) I don't have it because it's impossible for me because of my disability. 24 (10.7%) They don't know/ They don't answer) 22 (9.8%) Only 12.1% of the respondents have a business. Ownership is usually individual (41.4%) and shared (44.3%). 71.4% are mostly small businesses or companies without employees, in 11.4% their size exceeds 3 employees.	

Author	N	Topic	Results	Recommendations
			who have current or past experience in the development of an entrepreneurial business activity: REASONS To better my personal income 40 (33.9%) To increase my personal independence 36 (30.5%) To achieve a personal challenge 32 (27.1%) To reach social recognition 7 (5.9%) COMPETENCY: higher in self-management and social awareness, and lower in self-management and relationship management.	
Llorett, 2019	244	Social competence; using 3 themes Empathy Organisational Service orientation	Empathy and organisational competence are not significant for the entrepreneurial variables. Those with a business or want to start one perceive their social competence as high or very high. Main reason why people with disabilities give up an entrepreneurial project is its lack of business profitability.	
Lopez-Filipe, 2019	244	Competencies and the factors that promote or hinder entrepreneurship Self-management in EWD	Self-management influences two basic decisions: 1 the decision to start up a business in order to increase personal income, is linked to the competencies of transparency, initiative and optimism, 2 the decision to leave the business for lack of profitability is influenced, not only by the previous factors, but also by emotional self-control, adaptability and achievement.	
Manzanera-Roman, 2019	244	Impact of disability type on entrepreneurship	EWD with osteoarticular system disabilities start-up businesses to a greater extent almost 60% have launched a business at some point (28.6% have a current business, 28.6% had a business, but had abandoned it); visual system disability 14.3%; Hearing impaired 15.2%. May be hearing and visually impaired find paid employment more easily. Neuromuscular system 23.1%, they consider their own disability impedes them. Social factors are more determining than personal factors	Lack of economic resources or lack of institutional support for entrepreneurship are factors that condition entrepreneurship and should be taken into consideration to promote self-employment among EWD. Should be supported through programs, plans, economic aid, public and social policies designed by the administration and focused on the problems of EWD.

Author	N	Topic	Results	Recommendations
Navarro, 2019	244	Difficulties for entrepreneurs	Lack of economic resources when setting up a business, and, in second place, the doubt about the business profitability were main inhibitory reasons. 48.1% would prefer to an individualised business, 40.7% shared. Main reasons for setting up a business: greater independence and income, both 42.9%. Out of necessity 67.9%. Age of company more than 42 months 77.8%. Less than 3 employees 37.0%, more than 3 employees 25.9%, no employees 37.0%. Unemployed thinking of starting a business 40.9%. 87% services, 13% construction. 45.5% abandoned a business	
Olaz-Capitan, 2019a	244	Ownership, seniority in the sector, number of employees, status	Optimism is necessary for PWD to be entrepreneurial. Neutralise reasons for not becoming an entrep. Make sure those setting up businesses due to need should have more support than those who set up due to opportunity.	
Olmedo-Cifueuntes, 2019	178	Competencies in management skills	Important for achieving autonomy and economic independence (53%) Hierarchy: obtaining higher income, greater independence, achieving a challenge, and achieving recognition.	To acquire and develop certain competencies in order to develop an entrepreneurial model that improves the survival and the profitability of the existing businesses.
Ortiz-García, 2019a	94	Gender differences	Women start up fewer businesses than men (14% vs 16.9%). 41.3% do not have a business or intend to start one (vs 23.9% men). Intension to start one women 22.4% vs men 25.4%. Reason for not starting a business: women - lack of economic resources (3.98; men 4.20), uncertainty about business profitability women (3.59, men 4.27), lack of institutional support women (3.77). Not having family support, lack of training and lack of self-confidence similar in both genders. Women develop business out of necessity 51.7% and 71.8% are self-employed. Opportunity women (36.5%, men 38.9%), personal income women (33.3%, men 35.3%), personal independence women (30.2%, men 29.6%), personal challenge - similar.	Research if women are more vulnerable re competitiveness.

Author	N	Topic	Results	Recommendations
			Types of business: services women (81.8%, men 73.1%), industry women (18.8%, men 26.9%). Leave business due to lack of profitability women (49.2%, men 46.3%). No substantial disparities in relation to ownership, size, age, or type of activity.	
Ortiz-Garcia, 2021	94	Individual competences and social benefits.	EWD attribute competences to themselves cf non-entrep. Sig difs: self-control (0.049), optimism (0.01), catalysing change (0.003). Autonomy v important	
Perez, 2019	244	Age and EWD Less than 35 years, 35 to 50 years, above 50 years old	Under 35 years of age (11.1%), 35-50 years (51.9%), over 50 years (37.0%). U-shape relationship. Reasons for not developing a business: under 35 - lack of resources (34.2%), doubts about the profitability of the business (28.9%). 35-50 years: lack of economic resources (22.4%), doubts about the profitability (21.1%) 50+ years: lack of institutional support (20.3%), lack of economic resources (17.2%). Businesses with created at older ages are more likely to succeed (Oelckers, 2015 cited in Perez, 2019). Reasons for starting a business: under 35 years - achieve a personal challenge (36.4%), increase personal independence (27.3%); 35-50 years - increase personal income (36.7%), achieve greater independence (30.6%); 50+ - increase personal income (39.1%), achieve greater independence (30.4%). All age groups gave lack of profitability as the main reason for abandoning their business.	

Interview Study

The second was qualitative (papers n= 10) and included 15 semi-structured interviews which covered many aspects of being an EWD. These topics were personal and psychological; institutional/legal; environmental culture; educational/formative; economic and family. They were conducted with three categories of respondents:

- People with disabilities and experience of entrepreneurship, and their families
- People with disabilities without experience of entrepreneurship
- Professionals who work with people with disabilities (doctors, work counsellors, and social workers).

Details of gender, age, and numbers in each category were not provided.

Inevitably, many of the findings from the qualitative studies echo those of the survey, so here additional findings have been described. Avilés-Hernandez and Perez (2019) considered the various psychological aspects for EWDs. They found that self-esteem and self-confidence were the most important internal attributes along with internal security and adaptability. There were important environmental aspects of their personalities such as empathy/leadership and initiative. Ortiz-García and Olaz-Capitán, (2019b) took a broader perspective in a similar dichotomous analysis where differences in the formal and informal aspects were investigated. Consensus was found with the importance of self-confidence, the ability to perform as well as taxation, trust in the person/company, but there were differences in the importance of the impacts of financial help, accessibility and information, the circumstances of their disability and training.

More individual aspects and their contexts were included. A key aspect of whether a person with disabilities becomes an entrepreneur was the attitude of their family. These can encourage, being empowering and supportive, providing economic and emotional help as well as enabling access to training, while others other were over-protective. A way forward, via education/training, may be to develop the family's capacity to encourage autonomy within their family. This would also need acceptance and support from public institutions which can influence family attitudes (Lopez-Filipe and Manzanera-Roman, 2019). The socioeconomic implications were considered by Martinez-Leon et al., (2019), where again people with disabilities embarked on entrepreneurship as a method for increasing their income out of survival as well as achieving ambitions, but within the context of their doing so having higher expenses as a result of their disabilities and their environments often less rich in resources and with greater barriers (Martinez-Leon, Olmedo-Cifuentes and Nicolas-Martinez, 2019). These barriers were many and varied, including many aspects of everyday life. For example, lack of access to transport hinders not only education and training, but also healthcare and leisure activities, as well as negatively influencing the desire to set up a business. There was a direct relationship between accessibility, training and social inclusion and it was suggested that teachers needed training in improving access to education (Casado and Casau, 2019b). Llorett, Navarro and Banon (2019) looked at barriers in the financial environment, which were similar to those for the able bodied, but were more complex for EWDs, from reduced access to financing to influencing the type of business, and legal/taxation concerns that may be specific to Spain.

Jimenez and Escribano (2019) focused on the sociocultural aspects of becoming an EWD. They suggested that the language used was often discriminatory and defining groups as disadvantaged tended to make them invisible, which may explain the importance of striving for recognition in some. They also highlight possibilities, opportunities and resources are greater in urban areas compared with rural locations and the need for this to be considered. Access to training in general, was seen as fundamental to the establishment and the sustainability of entrepreneurship, but additionally, thought should be given to raising awareness of any training that is available and how to improve its accessibility for EWDs (Manzanera-Roman and Valera, 2019b). Many of these papers recommended normalisation and raised visibility for EWDs and Molina and Garcia-Palma (2019) suggested that public policies, resources and necessary infrastructures could better promote entrepreneurship anyway, but particularly for EWDs.

Olaz-Capitan and Ortiz-Garcia (2019b) combined an overview of different personal attributes, the environment around EWDs and how this could inform future policy/training development. They considered influences of personal-psychological, institutional-legal-public policies, cultural-environmental, educational-training, socio-economic, family and physical-accessibility. Additionally, they investigated which attributes were important (self-confidence, initiative, adaptability, teamwork, optimism, and self-evaluation), and how they contribute to their empowerment. They considered education/training very important and that policies should cover inclusive education, social recognition, entrepreneurial training, and awareness of family members, empowerment and career guidance. The professionals who were interviewed appeared to have more input here than other papers, and so it included recognition of how EWDs could be supported as well as what help they thought they wanted.

Table B4: The interview study

Author	Topic	Results	Recommendations
Avilés-Hernandes, 2019	Psychological traits that guide disabled people towards entrepreneurship	Internal: self-esteem/self-confidence, security/ strength, adaptability, self-realization/self-improvement, optimism, realism and mental clarity, resilience, usefulness and social recognition, autonomy, self-appraisal, emotional intelligence, and motivation. Interpersonal traits: entrepreneurship, empathy/ service orientation, feeling supported/accompanied, teamwork, leadership, social skills/sociability, transparency and conflict management.	Programmes of empowerment and personal development in addition to business training.
Casado, 2019b	Physical accessibility: barriers to using education, information, and use of IT	Also lack of access to transport hinders training, healthcare and desire to set up a business. Teachers need training in how to improve access to education. direct relationship between accessibility, training and social inclusion	Focus on the adaptation of the environment from the prevention, developing and constructing initially, from an inclusive point of view, where the needs and interests of all possible users are taken into account more than the creation of specific environments, products, and services for people with disabilities
Jimenez, 2019	Socio-economic and cultural environment, the geographic one and the aspects related to the most personal motivations.	Socio-economic and cultural environment: definition of disadvantaged groups is detrimental - language used effectively makes people and their problems invisible, which perpetuates prejudices. Financial, emotional support and affirmative action measures are important. Aid (economic and financial kind) essential and so is emotional support. Geographical scope: depends on the resources it can offer. Urban>rural. Personal motivations: need for recognition is a critical element in entrepreneurial behaviour.	Normalise visibility of people with disabilities, use role models. .
Llorett, 2019b	Economic, fiscal and organisational barrier or obstacle	Impact is greater for people with disabilities. Economic sector, access to financing, the legal form of the company, and the need for adequate taxation, are elements that are configured as essential when analysing the principal issues that affect EWD.	
Lopez-Filipe, 2019b	family dimension as a determinant of EWD	Family attitude is the most crucial aspect of the family dimension, which can impede (a protective, overprotective or supervised family mode) or foster	Family attitude that fosters the entrepreneurship are support of

Author	Topic	Results	Recommendations
		(empowering and supportive – economic, emotional, and access to educ/training) entrepreneurship. The existence of economic, educational and emotional support fosters a family attitude that enhances entrepreneurship. Development or promotion of the family's capacity for autonomy of disability Support from public institutions.	administration, development of specific education and execution of sensitivity campaigns.
Manzanera-Roman, 2019	Education impacts on EWD	Training is a fundamental element to sustain entrepreneurship. Both specific training in entrepreneurship and inclusive education so that EWD can access training on an equal footing with able bodied, are critical to the promotion of entrepreneurship. Formal: specific training in entrepreneurship is mentioned, aimed at acquiring the necessary knowledge about administrative procedures, legal obligations, technical aspects, management. Lack of relevant info about training and difficulty in accessing what is available.	Individualized training Continuous training. Training for families too.
Martinez, 2019	Socio-economic aspects that impact entrepreneurship	Disable people undertake mainly for a survival need because they have less income and higher expenses derived from their disabilities, as well as their self-realisation need. The social status of recognition for being self-sufficient and generating wealth is another important socioeconomic element	Governmental fiscal policy needs to be developed with positive action measures aimed at entrepreneurs in general and entrepreneurs with disabilities in particular. These need to be tailored to types of disability. They also need to be publicised appropriately. Training courses. Tax incentives (including family members)
Molina, 2019	Political and institutional aspects	Public polices and regulatory frameworks can influence entrepreneurship. They can provide resources and necessary infrastructures as well as promoting the potential of entrepreneurship. There needs to be a social drive to put policies that support EWD into practice to drive entrepreneurship for all, especially EWD.	Need to normalise EWD. Development mechanisms that do not differentiate between EWD

Author	Topic	Results	Recommendations
			and able bodied but are equally accessible.
Olaz-Capitan, 2019b	Personal-Psychological, Institutional-Legal-Public Policies, Cultural-Environmental, Educational-Training, Socio-Economic, Family and Physical-Accessibility,	Education and training v important particularly for the design, development and implementation of a business. Institutional support – public policies (appropriate to different levels of geography) and with university support. Policies should over inclusive education, social recognition, entrepreneurial training, and awareness of family members, empowerment and career guidance. Personal attribute: self-confidence v important. Initiative – positivity, adaptability, teamwork (mentioned most by the professionals supporting the EWDs), optimism – resilience, self-evaluation	Devel. a training course that encourages personal growth. Institutional support – policies
Ortiz-Garcia, 2019b	Differences in entrepreneurship among EWDs	Two groups of factors converge: formal (educational-training, economic, institutional and labour) and informal (cultural, psychological or family).	

Recommendations

Not surprisingly many papers recommended increases in training. These could develop entrepreneurial competencies at the individual level as well as promoting a proactive attitude amongst people with disabilities (Casado and Casau, 2019a), and personal empowerment (Avilés-Hernandez and Perez, 2019) and help families provide appropriate support (Lopez-Filipe and Valera, 2019; Manzanera-Roman and Valera, 2019b). Improved training might allow #ewds to perceive gaps in the market more effectively (Escribano and Jimenez, 2019) and that a model needs to be developed that improves the survival and profitability of existing businesses (Olmedo-Cifuentes and Martinez-Leon, 2019). Also programmes that support entrepreneurial activity generally should be developed, including economic resources, planning, policy and improved access, that could be utilized by EWDs (Casado and Casau, 2019b; Manzanera-Roman and Senan, 2019; Martinez-Leon, Olmedo-Cifuentes and Nicolas-Martinez, 2019).

There were also suggestions that being an EWD could be normalized, and role models used to promote this (Jimenez and Escribano, 2019) and that support mechanisms should not necessarily discriminate between EWD and the able-bodied (Molina and Garcia-Palma, 2019). Another important aspect of future research will be to investigate if women are more vulnerable with regard to competitiveness (Ortiz-García and Olaz-Capitán, 2019).

Quantitative studies

Formal National Surveys

Five surveys were found: from Canada (n=1), Europe (n=2) and the United States (n=2).

The UK, Labour Force Survey (LFS) data from 2003 was analysed to compare people with work limiting disabilities, non-work limiting disabilities and non-disabled men and women (Jones and Latreille, 2011). Results were very similar for the non-disabled and the no-work limited people with disabilities. Men and Women with disabilities were found more likely to be self-employed and more likely to work from home. Men appeared to be self-employed due to lack of other opportunities, and 80% of them did not have employees. Reasons for self-employment appeared to be more positive for women. They found a positive relationship between age and self-employment for EWDs. A positive relationship between qualifications was identified for both self-employment and employment in women EWDs, but this was only apparent with employment for men. They also looked at ethnic minorities where male EWDs were less likely to be working overall and those working were more likely to be self-employed. Ethnic minority female EWDs were less likely to be either. Self-employment was more likely in households with dependent children. Authors suggested that for men in particular, self-employment was pursued out of necessity and discrimination in the workplace, as well as flexibility to accommodate disabilities for both genders (Jones and Latreille, 2011).

The Canadian Survey on Disability, sampled from the 2012 survey, was examined for differences between self-employed and employed people with disabilities, and which groups earned more (Yang et al. 2022). Their general findings were that EWDs tended to earn less than employed people with disabilities. Control variables that were associated with lower

earnings included discrimination, disabilities related to dexterity and memory and disability-related income supports. Higher earnings were associated with more education, job tenure, being married, and hours worked weekly.
Using Social Cognitive Career Theory as a framework, they devised five hypotheses:

H1: EWDs with older age of onset of disability earn more than younger age of onset, which was supported. Those with a younger age of onset earned more from employment.
H2: EWDs with fewer unmet accommodation needs earned more, also supported. The needs included aids/devices to support their disabilities.
H3: EWDs with disabilities derived from the workplace earn more, but this was not supported.
H4: Women EWDs earn less (than male EWDs and employed), this was supported. Both men and women entrepreneurs earned less than the employed, but women EWDs earned less than men. Ortiz-García and Olaz-Capitán, (2019) considered gender in the Spanish survey where they found women EWDs to fair less favourably than men, on all factors (e.g. wanting to start a business, financial support etc.), but they did not compare earnings.
H5: older EWDs earn less, the support for this was equivocal as younger EWDs also earned less and so there was a U-shape curve to this relationship. Perez and Avilés-Hernandez (2019) also looked at age in the Spanish survey but were interested in why people with disabilities chose to start businesses, or not, rather than earnings across age groups. They did, however, state that EWDs abandoned businesses due to lack of profitability irrespective of their age (Yang et al. 2022).

One study from Europe (Pagan, 2009) and two studies from the US (Gouskova, 2019; Renko, Parker Harris and Calder, 2016) considered self-employment compared with employment. Pagan (2009) conducted an analysis with the European Community Household Panel for the period 1995–2001. There were more self-employed with disabilities than non-disabled (with the exception of Belgium). More male EWDs were found in Greece (10.5%), Portugal (8.6%) and Ireland (8.1%), whereas female EWDs were in Greece (13.5%) and Portugal (10.3%), then Austria (8.2%) and Spain (7.7%). No gender difference was found in more developed countries; Germany, Denmark and The Netherlands for males and Belgium, Finland, Germany, Denmark and The Netherlands for females. Those with the most severe disabilities were likely to be self-employed, probably due to be able to accommodate flexibility between lifestyle and work life. Highest levels of job satisfaction were found in Scandinavian countries with the lowest in Mediterranean ones (generally the opposite pattern was found in employed people with disabilities) (Pagan, 2009).

Gouskova (2019) using the Current Population Survey also showed that self-employment was more frequent for those with disabilities compared with workers without disabilities and that these differences increase with age and greater education. Additionally, wage levels were similar between self-employed and employed people with disabilities, but the self-employed worked fewer and more varied hours. The same pattern was apparent for men and women with lower percentages for women (e.g. 3.1% for men and 2.4% for women). In terms of EWDs by race, African American men were least likely to be self-employed (2.2%; women 2.1%), compared with white (3.6%; women 2.7%) and other races (4.9%; women 2.2%).

Therefore the most likely EWDs were white men who were older with more education (Gouskova, 2019).

Renko, Parker Harris and Calder, (2016) used the US, Panel Study of Entrepreneurial Dynamics to investigate the start-up process for nascent EWDs. Using the hypothesis format: H1: those wanting to start a business with disabilities had less social support than those without disabilities – partially supported as these was little difference between for example helpers, but nascent EWDs lived in smaller households and included fewer people in the start-up team. H2: nascent EWDs had less money to invest in their business – supported as their investments were significantly smaller and start-up investment was the most important factor that predicting organisational emergence. H3: nascent EWDs had less human capital to invest – mixed support as EWDs tended to be older and had more work experience, but their education levels were lower. Different analyses were used for H4-H7 which were all related to achieving organisational emergence, which were concerned with length of time (H4), influence of human capital (H5), influence of social capital (H6) and financial support (H7). They found that H4, time taken to emerge was longer for aspiring EWDs, but H5-H7 were not supported. Unlike other surveys, they found that increased education for people with disabilities was associated with less aspiration to start-up a business (possibly due to those with more education to be more employable) and in this survey, nascent EWDs did not aim to work part-time (possibly because the US does not have the social support finances of for example Europe). In sum, disability status has a robust and negative effect on business start-ups even after industry, individual and firm-level factors have been controlled for (Renko, Parker Harris and Calder, (2016).

Table B5: Studies suing national panel data

Authors	Subjects	Focus of study	Findings	Recommendations
Gouskova, 2020 US	811,373 men and 903,300 women, 0.2% disabled, 21-61 years of age	Self-employed compared with non-disabled and employed with disabilities	Current Population Survey 2000 to 2015. More EWDs were self-employed compared with non-disabled (men and women EWDs); Self-employment differential increases with education and age. Patterns were more apparent in male EWDs. People with disabilities might choose self-employment because of non-monetary motives They choose self-employment at least in part because of the flexibility it offers with regard to work hours.	Public policies encouraging self-employment as a way to increase their labour market participation. Encourage self-employment by eliminating barriers and reducing employer discrimination to provide choice.
Jones, 2011 UK	Sample size not given	Self-employment in people with disabilities compared with non-disabled and non-work limiting disabled.	Labour Force Survey data from 2003. They distinguish between disabilities that are work limiting and those not – these results are for work limited as non-work limited and non-disabled are similar. Men and Women with disabilities more likely to be self-employed. More likely to work from home. 80% of men EWDs do not have employees. Men appear to be self-employed due to lack of other opportunities (more positive for women). Positive relationship between age and self-employment. Positive relationship between qualifications and both self-employment and employment for women, but apparent only with employment for men. Ethnic minorities: men less likely to be working overall and those that do are self-employed (women less likely to be either). Self-employment more likely with dependent children in household. Reasons: necessity and flexibility to accommodate disability.	
Pagan, 2009 Europe	443,119 189,176 in total, women, 15-64 years,	Self-employment in people with disab.	European Community Household Panel Comparisons of how many, men, women by country. Self-employment rose with age, was higher among men, showed nonlinear patterns with respect to education	Policy-makers - encourage self-employment to increase the levels of wellbeing and

Authors	Subjects	Focus of study	Findings	Recommendations
		ECHP 1995–2001 for 13 European countries	More self-employment in those categorised as more disab. Disabled people are more likely to be in self-employment compared with non-disabled people, especially in Sothern Europe. SE disab report higher/at least equal levels of job satisfaction compared with employee counterparts, especially men.	employment of people with disabilities in Europe. Fear of losing disability benefits: Public benefits systems must allow the recovery of disability benefits when the option of self-employment for disabled people fails
Renko. 2016 US	150 disabled from 1214 Nascent entreps. With and without disabilities from the PSED II data set	Comparison from 5 annual surveys from 2005/2006. Longitudinal	Panel Study of Entrepreneurial Dynamics. Tested 7 hypotheses (with control for appropriate variables). H1: EWDs would have less social support – partial support (household size smaller, start-up team lower). H2: EWDs smaller start-up investments – significantly lower. H3: EWDs lower human capital – mixed (more industry experience, but mainly because due to older age, and also lower education).Significantly less likely to achieve the first sale, marginally less likely to acquire external funding over 5 years, variable that accounts for starting exchanges and acquiring external resources, entrepreneurs with disabilities are at a significant disadvantage. H4-7 used a series of dummy variables. Found: if no disabilities have 1.8 times the odds of achieving firm emergence. H5–H7) not supported. Higher levels of human capital, more social support, and bigger initial investments by the start-up team do not benefit aspiring entrepreneurs with disabilities any more than they benefit other potential entrepreneur.	Disability status as a contextual factor is very important. 'one-size-fits-all' types of training programmes for entrepreneurs may not cater to the specific needs of entrepreneurs with disabilities. Making sure that people with disabilities do not fall further into poverty is essential to encourage entrepreneurship in this group.
Yang, 2022 Canada	810 EWD matched for gender age race and disability severity with employed PWD Variety of disabilities. Data from 2012 CSD	Comparison of earnings	Canadian Survey on Disability Entrepreneurial pursuit has a stronger negative association with the earnings of PWD who experience earlier disability onset ages, those who report more unmet accommodation needs, and those who are female. Earnings was dependent variable.	Entrep. Pursuit is not equal for all PWDs. Age: little research that examines effects of age. Age at onset, chronological age interact with earnings potential. Likelihood of disability

Authors	Subjects	Focus of study	Findings	Recommendations
			Negative relationships with earing ins: disabilities related to dexterity and memory, discrimination, and disability-related income supports. Positive: Education, being married, job tenure, and hours worked weekly. EWDs earned less than employed PWD. Tested hypotheses: H1 EWDs with older age of onset of disab earn more than younger age of onset – supported H2 EWD with fewer unmet needs earned more – supported H3 EWDs with disab. From workplace earn more – not supported H4 Women EWD earn less (than male EWDs and employed) – supported H5 older EWD earn less – support equivocal (also younger EWDs earned less – U shape)	increases with age, retirement age is increasing - little research on children with disabilities as they age re entrep and about EWDs who want/need to continue working.

Other Studies Using Questionnaires

This section includes studies from the US (n = 3) and from Europe (n = 6).

The most useful study in this section is that of Larsson (2006) who developed a survey for all the disabled people who had received a start-up business grant in Sweden. 538 EWDs responded, with 51% women and an average age of 43 years (average age of entrepreneurs in Sweden was 38 years). Larsson (2006) found that 21.8% women worked full time (vs 32.8% men and both less than entrepreneurs without disabilities). Women tended to support themselves less from their businesses. However, there were similarities with finances in that Women and men acquired loans at the same rate and the same number thought lack of capital was responsible for business problems (approx. 50%). Interestingly, women gave lack of finances as the reason for terminating the less often than men (23% vs 28%). Two years on from acquiring their grant, only 31.2% reported that they were 100% involved in their business, although 60% were still functioning, and 40% were no longer working in their own business. The reasons given for terminating their businesses were illness (38.4%), shortage of capital (26%), potential loss of social security (20.6%) and excess work load (1,7.2%). On balance, Larsson (2006) concluded that EWDs succeed to roughly the same extent as other entrepreneurs.

Two US surveys and one from Germany examined self-efficacy. The first by Castillo and Fischer (2019) used five questionnaires with 172 respondents with disabilities to determine personality traits that would encourage entrepreneurship. They found positive and significant relationships for a proactive personality, entrepreneurial self-efficacy and an optimistic outlook with intensions to become self-employed, while fear of failure made this less likely (Castillo and Fischer, 2019). The second, Tihic, Hadzic and McKelvie (2021) used the entrepreneurial self-efficacy scale with 127 EWDs. They found that none of the control variables (race, age, marital status, dependents, education) were related to self-efficacy. They also showed that targeted programmes were efficacious at improving self-beliefs towards becoming successful entrepreneurs, particularly with one-on-one support and that business incubators could be highly influential. A strong negative relationship existed between barriers to entrepreneurship and the self-efficacy of EWD (Tihic, Hadzic and McKelvie, 2021). The survey in Germany (Jasniak, Ermakova and Baierl, 2018) included 221, hearing impaired individuals and showed that high scores in entrepreneurial self-efficacy and general social support had a positive and significant effect on social entrepreneurial appraisal, but perceived barriers did not affect it. They suggested that the focus should be on what supports becoming a social entrepreneur rather than addressing barriers, at least for the hearing impaired.

Ostrow et al. (2019; 2021) developed a questionnaire to explore how psychiatric disabilities impacted on self-employment in 60, US adults. Their sample was dominated by older, white women who were educated to degree level and operated as sole traders. Numbers were too small to make comparisons between different groups. Their aim was to explore why they had become entrepreneurs. Many had experienced discrimination at work and in educational settings and preferred the flexibility, control over work and work-life balance that self-employment offered. However it was not possible to determine if self-employment was financial advantageous (Ostrow et al., 2019). In a further analysis, respondents identified their top challenges as business finances, personal issues, filing and paying taxes and lack of business

knowledge, with the most frequently used supports as self-employed peers, friends and online. Satisfaction with being self-employed was generally high, particularly with age, and this was not related to factors such as gross income. These respondents appeared to prefer/have more access to informal supports compared with institutional support, possibly because they have different needs (Ostrow et al. 2021).

Dimic and Orlov (2014) looked specifically at attention deficit hyperactivity disorder (ADHD) in 270 Finns with and without ADHD. Their sample included men and women, employed and entrepreneurs. They found that entrepreneurs shared similar characteristics regardless of ADHD status, but those with ADHD were more likely to be entrepreneurs, irrespective of gender, age and race. While 'drive and determination' was important to all entrepreneurs, those with ADHD also scored higher on 'need for autonomy' and 'need for achievement'. ADHD did not affect the probability of being employed or unemployed but did appear to enhance characteristics applicable to becoming an entrepreneur.

A more practical study was reported on by Rihtarsik and Avsec (2019) who considered the potential of mobile devices to teach women with disabilities to promote their goods better via entrepreneurial education. This was an EU funded project and the 197, women were from poor regions of Turkey, Poland, France, Greece and Slovenia. Their pedagogical preferences were found to be: simple combined visual and text instruction; smart location of items on screen; immediate feedback; co-location of feature and function; conventional navigation and smart icons; direct manipulation and several metaphors implemented on the user interface.

Another survey of 339 Lithuanian disabled people investigated motivations for professional development and entrepreneurial education (Raudeliunaite and Gudzinskiene, 2016). They divided answers into subjective and objective, and positive and negative. Positive motivations were similar to other studies and so their challenges may shed more light on the usefulness of this study. The subjective challenges included communication and emotional difficulties, lack of knowledge and decisiveness and social skills. In contrast the objective ones included the lack of the adjustment of physical environment, financial difficulties and health problems.

Table B6: Other studies using quantitative methods

Authors	Subjects	Focus of study	Findings	Recommendations
Casado and 11 others 2019 Spain	244, 60.1% women, 42.7% aged 35-50 years, 53.9% university and vocational training of higher degree		Authors developed survey See table in Spanish studies section.	
Castillo, 2019 US	172 people self-identifying as disabled, 94 women, mean age 35.5 years, Ethnicity: 96 Hispanic, 65 White, 7 African American, 2 Asian American, 2 other Education: 65 High School Diploma, 34 Associate degree, 26 Bachelors, 28 Master's .	Self-efficacy personal variables that affect career choice, proactive personality, entrepreneurial self-efficacy, fear of failure and optimism, as predictors of entrepreneurial intentions	Employed full-time, part-time and unemployed. Convenience sample via NGOs Proactive personality and optimism show moderate relationships with entrepreneurial self-efficacy. Fear of failure was not associated with entrepreneurial self-efficacy. Knowing individuals self-efficacy levels may enable others to help them more effectively.	Entrepreneurial self-efficacy is strong predictor. May be useful to know how an individual scores. Facilitate networks and courses for highly motivated individuals. Train trainers
Dimic, 2014 Finland	270 with and without ADHD, 62% women, majority aged 25-35 years	ADHD and the predisposition towards entrepreneurship.	Those with ADHD have a significantly higher marginal probability of being entrepreneurs, while ADHD does not affect the likelihood of being a wage earner or being unemployed. People with ADHD exhibit significantly higher values in the entrepreneurial tendency measures relative to others. Exploring the determinants of entrepreneurial tendencies, ADHD affect has a positive impact on many entrepreneurial characteristics. The significance of the ADHD variable was maintained in the presence of entrepreneurship and	

Authors	Subjects	Focus of study	Findings	Recommendations
			demographic controls. Overall, these findings highlight the importance of the ADHD community as a rich source of entrepreneurs.	
Jasniak, 2018 Germany	221 hearing impaired, 58.4% women, aged 19 – 72 average 41.2 years, university qualification 25.8%, other academic degrees 22.2%, higher educ 15.8% Employed, self-employed, unemployed	Impact of self-efficacy on social entrepreneurial appraisal	Developed model to test social entrepreneurial appraisal, entrepreneurial self-efficacy, general social support, perceived barriers among hearing-impaired individuals and general disposition to entrepreneurship. Social entrepreneurial appraisal was positively driven by entrepreneurial self-efficacy and general social support. Perceived barriers among hearing-impaired individuals were negatively associated with social entrepreneurial appraisal had to be rejected and so these do have an effect.	Importance should be given to the role of entrepreneurial education and heterogeneous networks across minorities.
Larsson, 2006 Sweden	538 who had received a start-up grant and registered as disabled 51% women, average age 43 years, 19% lived alone 22% immigrants	Overview of how EWDs were performing and in comparison with other Swedish entreps. Survey and interviews (qual data not reported)	Women support themselves less from their business (21.8% worked full time vs 32.8% men) Women and men acquired loans at the same rate and the same number thought lack of capital was responsible for business problems (approx. 50%). Women gave termination of business due to lack of finances less often than men *23% vs 28%). Only 31.2% reported at follow-up that they were 100% involved in their business. Most worked part-time in their firm (very different compared with entrepreneurs without disabilities). 40% were no longer working in their own business. 26% gave shortage of capital as reason.	Disability management programmes: entrepreneurship should be considered as an option for people with disabilities.

Authors	Subjects	Focus of study	Findings	Recommendations
			38.4% end their business due to illness, 20.6% due to loss of social security and 17.2% excess work load. Main finding: EWDs succeed to roughly the same extent as other entrepreneurs.	
Ostrow, 2019, 2021 US	60 business owners with psychiatric disabilities, up to 5 employees, 83% women, 47% older than 55 years, 83% white, education: 32% college, 35% bachelors, 33% maters/PhD/prof qual.	Challenges and supports for EDs	Authors developed survey Businesses were home-office based (88%), provided services (95%), provided services to people with psychiatric histories or disabilities (68%). Challenges: lack of knowledge about how to run a business (67%) business finances (78%) filing and paying taxes (65%) and legal issues (52%). Individual challenges: personal issues (69%), lack of access to resources (58%), cultural issues (49%), and disability benefits (19%). Use of supports: friends (90%) self-employed peers (82%) online (78%) family (72%) mentor/coach (72%). Used informal business supports, rated more helpful - friends, family, mentors, online resources, and other business owners. Institutional supports, e.g. Small Business Development Centre, were less frequently used and less likely to be considered helpful. Older age and older business were assoc. with higher satisfaction. Experiencing autonomy and balance constitutes success in this group.	Investigate if these business employ proportionally more people with disabilities. Reluctance to use formal help – due to negative experiences in other formal settings (e.g. education) or accessibility?
Raudeliunaite, 2016 Lithuania	339 mobility, hearing and vision disabilities	Factors influencing professional development and entrep. education Survey	Motives were objective and subjective. Main objective reasons: better material provision, participating in social life, maintenance of close environment, integration into labour market, the acquisition of a profession creates conditions to seek higher qualification and career.	

Authors	Subjects	Focus of study	Findings	Recommendations
			Subjective reasons: need for communication and social recognition, independence and personal realization, assert themselves as a personality. Objective problems: lack of the adjustment of physical environment, financial difficulties and health problems. Subjective problems: communication and emotional difficulties, lack of knowledge and decisiveness and social skills. Important objective factors for the development of their professional career: a legal framework (legal acts would encourage the professional empowerment of persons with disabilities, motivate persons with disabilities towards professional activeness, would create encouragement to work/discourage passiveness and unemployment of persons with disabilities), close cooperation between the organisations of persons with disabilities and other public organisations, accessible infrastructure, the provision of consultation and mediation services and their accessibility, the formation of positive social attitudes towards persons with disabilities, systematicity of the designing of their professional career and entrepreneurship education. Important subjective factors of the designing of their professional career are related to personal characteristics as well as organisational, independence, communication and cooperation skills.	
Rihtarsic, 2019 Europe	197 women, 40 from Poland, 77 from Turkey, 15 from France, 20 from Slovenia and 15 from Greece, 18 – 68 mean	Mobile use in entrepren. Learning Survey	1) Mobile learning is a proper strategy to support the needs of learners with some disabilities; 2) entrepreneurial skills might be built by spaced and deliberate practice, as well as perceptual exposure; and 3) technical pedagogical content knowledge might be a useful basis for design of an effective mobile learning course.	1) Simple combined visual and text instruction; 2) smart location of items on a screen; 3) immediate feedback; 4) co-location of feature and function; 5) conventional

Authors	Subjects	Focus of study	Findings	Recommendations
	37.8 years. 38 had degreed but most had lower education levels		Other people and internet were most frequent sources of info. Lower educ. levels preferred text and visual and self-paced learning + mentor, humour and metaphors.	navigation and smart icons; and 6) direct manipulation and several metaphors implemented on the user interface.
Tihic, 2021 US	127 EWDs, 47% women, 64% 35-55 years old, 64% married, 64% at least one degree, 87% military vets, 38% had 1 disability, rest 2 or more	Entrepreneurial self-efficacy effect looking at different programmes	Self-efficacy – dependent variable; independents - Support from service providers and social networks, Quality of service received from service providers and entrepreneurship programs, and perceived difficulty caused by Barriers to entrepreneurship. Controlled for gender, race, age, marital status, dependents, and education. None of control variables were related to self-efficacy Custom-designed programmes help EWD overcome traditional barriers that often hinder at-risk and marginalized individuals' belief in their abilities to be successful entrepreneurs. Entrepreneurship training received through one-on-one support and business incubators act as a highly influential support tool of EWD –beyond other traditionally espoused support programmes. Found a positive relationship between the services received from entrepreneurship and disability-specific support programs on self-efficacy. Conversely, we find a strong negative relationship between barriers to entrepreneurship and the self-efficacy of EWD. Findings align with Critical Disability Theory, which advocates more inclusive access to entrepreneurial support for PWD.	Programmes that create a positive impact on EWD's self-efficacy were those that were perceived to offer high quality of personalised service and reduced the perception of barriers to entrepreneurship. Entrepren programs aimed at EWD should put more weight on familiarising themselves with disability-related resources. Mentoring, one to one support, role models,

Qualitative Studies

There were 18 studies included in this section: (UK = 4; rest of Europe = 8; US = 5; Australia = 1. These are in addition to the 9 papers from Spain.).

A typical thematic approach has been adopted to describe the studies here.

The theme of barriers experienced by EWDs was explored in four studies (2 papers are from the Spanish study). Ng and Arndt (2019) interviewed two blind, serial entrepreneurs (one based in UK, one in another European country) to investigate how they overcame challenges. Despite having many differences, they were both highly educated and were professionals, both undertook high-risk ventures and were not motivated to become self-employed. In each case, their own disability drove their entrepreneurial efforts, one wanted to set up organisations around the world to champion the needs of people with disabilities, and the other set up charities to raise funds for paraplegia research. Both had personalities and attributes, initially and which developed, that allowed them to succeed in their missions. As such they each challenged societal attitudes towards those with disabilities, reducing barriers for others and becoming significant role models.

Norstedt and Germundsson (2022) conducted interviews and a focus group with 16 self-employed Swedes. An umbrella barrier identified was that EWDs perceived being less recognised by society and some organisations, existing networks and supporting functions for self-employed, did not appreciate their needs, and so they experienced difficulty accessing networks (including physical barriers) and not fitting in with cultural images of self-employed (white, male, hero) which lead to further social exclusion. They discovered some unintended barriers created by the government bodies responsible for people with disabilities. Notably these were participants not opting for the start-up grant, as this would have to be paid back if the business failed within three years (EWDs were exposed to greater financial risk) and the institutional financial support resulted in more administration and monitoring with made them feel that they were regarded with suspicion when justifying their claim. Similar institutional barriers were found by Llorett, Navarro and Banon (2019) in Spain when looking at the financial and legal/taxation environments for EWDs.

Governmental driven barriers were also found by Csillag and Gyori (2019) in their study with 10 Hungarian EWDs. Here there were legal considerations, VAT was set at 27%, and unfairness's such as companies given tax benefits for employing people with disabilities, but EWDs did not get any tax breaks. They considered that Hungarian society was not supportive generally, that the entrepreneurial mind-set was lacking in Hungary and corruption existed in business – all creating barriers. The other barriers covered many aspects of life such as physical access, lack of business education and mentoring. Psychological barriers (e.g. self-confidence) were perceived as being worse than physical ones, explained to some extent by EWDs seeing their identity as an entrepreneur first, and a person with disabilities second. They received help/support form family/friends but this was not sustainable and could blur the home/work boundaries, and yet paying for assistance could be a barrier. Also, (Lopez-Filipe and Valera, 2019), families and teachers could be overprotective, hindering entrepreneurial endeavours (Csillag and Gyori, 2019).

Three studies by the same author were attempting to describe the identities of EWDs using a socially constructed framework. The first study, (Jammaers and Zanoni, 2018) used data from 15 Belgian EWDs to construct a unique identity with four facets. The 'archetypal identity' (a motivated individual with control over themselves and their business), a 'unique entrepreneur' (their disability was reframed as an advantage/opportunity), 'entrepreneur by default' (started a business driven by necessity/discrimination in employment settings) and the 'collective entrepreneur' (this stresses their own individual heterogeneous skills as well as the mutual dependencies between individuals involved in the business). This framework was further explored in their second paper with 31 interviews with Belgian EWDs (Jammaers and Zanoni, 2020). They found that the 'archetypical' and the 'unique entrepreneur' confirmed the individualistic, heroic 'entrepreneurial self' in control of his/her destiny, while the 'default' and 'collective entrepreneur' countered this identity. They argued that this allowed EWDs to construct a more complex 'self' that challenges social norms. The third study explored how disability inspired entrepreneurship (Jammaers and Williams, 2021). This included 40 Belgian EWDs (it is not clear from the papers if there was any overlap of subjects) where they investigated differences between those running a disability oriented business and those not. Participants all thought their disability was a positive value to the business as it encouraged dispositions beneficial to running a business (e.g. resilience, positive mind set), and gave more positive 'pull' reasons (e.g. creative freedom, flexibility) than negative 'push' reasons (e.g. discrimination, burnout) for becoming entrepreneurs. For those running a disability related business, this positive value of their disability was mentioned four times more frequently (Jammaers and Williams, 2021).

Two further studies, based in the UK also considered identity. Kasperova, Kitching and Blackburn (2018) created a framework from data derived from three EWDs who had acquired their disability in adulthood. They conceptualised entrepreneurial identity that exists as a causal power in its own right – an approach that can be applied to any entrepreneur. Kasperova's second paper (2021) investigated how EWDs gain legitimacy with customers with 42, UK EWDs. She focused on how EWDs made known their disability in four conditions: 1. revealing impairment and conforming to a mainstream market; 2. revealing impairment and selecting a niche disability market; 3. revealing impairment and transforming a mainstream market; and 4. passing for 'normal' and conforming to a mainstream market. The first group were very flexible to customer responses. The second used disability as a form of symbolic capital which enabled entrepreneurs to position themselves as experts in the field able to empathise with customers who share their experience of disability. The third group were selling disability items to mainstream markets (e.g. helping other organisations help their disabled customers) and so these EWDs intentionally revealed their impairment to communicate that expertise and empathy. The last group often did not reveal their disability because it was invisible in most circumstances and they were concerned about stigma. EWDs often used more than one strategy (Kasperova, 2021).

The next group of studies investigated advantages and challenges of being an EWD. Harris, Renko and Caldwell (2013) investigated self-employment and social entrepreneurship in the US with 19 interviews and 27 in focus groups. They considered three key aspects to self-employment: 1) education, training and information; 2) finance, funding and asset

development; 3) networking and supports. Social entrepreneurship was thought to be a good way in for people with disabilities not only to become self-employed, but also to develop businesses. To achieve this, business related education needed to be more accessible, better understanding of how policy and benefits education (EWDs were not clear about what they could claim if running a business and could be stigmatised by stakeholders if they were claiming while being a business owner). Financing was challenging often because of the risk of losing social security when earning, limitations of how to borrow money (particularly when people with disabilities are more likely to live in families that are asset poor and so borrowing from family is not feasible), public programmes were seen as a way round the social security complications. The lack of financial capital/investment was perceived as the biggest barrier to entrepreneurship, and this, along with other forms of support, dwindled once a business had started, but EWDs need support for longer if their businesses are to survive. A lack of financial literacy was also a problem and required more education. Formal networking may have addressed some of these issues, but they were perceived to be far less helpful than informal networks, even though these informal ones were less able to provide financial advice. The EWDs and stakeholders thought that mentorship was very important and the EWDs thought that a EWD mentor would be particularly helpful.

Another US study looked at the reasons 18, EWDs gave for being self-employed or owning businesses (Ashley and Graf, 2017). Responses were categorised under three topics: 1 reasons for self-employment (negative past work experiences, health challenges, a last resort, opportunity to thrive); 2 the process of becoming self-employed (business/educational training and assistance, help from others, role of the vocational rehabilitation counsellors), and 3 the challenges encountered (interference, time management, networking and communicating, managing business and its growth, funding and financing, people-related resources). The majority of participants revealed negative and/or unhelpful interactions with vocational rehabilitation counsellors and suggested that self-employment should be offered routinely to people with disabilities and that counsellors should be trained accordingly.

An overview of the limited research conducted in Australia, used two case studies to illustrate the challenges that EWDs faced (Maritz and LaFarriere, 2016). One had gone blind believed his blindness was a catalyst for business as he wanted to do adventurous pursuits and he could not find existing businesses willing to take him as a person with disabilities. The second had been a florist, which she continued and developed after an accident had left her a paraplegic. Despite many differences, both experienced difficulty in getting funding and both thought they were discriminated against despite robust business plans. They had each managed to develop a business despite lack of formal training/financial support and employed 2/3 others.

This group of studies focus on EWDs with intellectual disabilities. A recent study from the US included interviews with seven people with intellectual disabilities and their support person to explore how they managed social entrepreneurship (Caldwell, Harris and Renko, 2019). Their findings are summed very comprehensively in the table below from their paper. This has been included as this would likely apply to many EWDs generally.

Table B7: Management barriers (adapted from Caldwell, Harris and Renko, 2019)

Barrier category	Barrier experienced	Need
Financial/economic barrier	Certifications are expensive Discrimination limits funding opportunities Free business development education unsatisfactory, but cannot afford paid options Cannot afford to hire more employees Awareness of finances, but overall lack of business-related financial literacy Concern about making too much money and losing benefits	Need funding opportunities for social entrepreneurs with intellectual disabilities Need affordable certification Need business-related financial literacy for people with intellectual disabilities Need to address asset limitations in policy
Attitudinal barrier	Stigma associated with intellectual disabilities: don't believe they can own a business or devalue ownership through charity-model approach Discrimination against people with intellectual disabilities and exclusionary practices: leading up to entrepreneurial entry and during business development	Need to demonstrate that people with intellectual disabilities can be social entrepreneurs Need to better identify areas where discrimination occurs in this context
Traditional expectations barriers	Underestimate entrepreneurship training and support needs Social entrepreneurs' expectations may be seen as unrealistic Key supports' expectations affect social entrepreneurship	Need to identify training and support needs to establish best practices Need to better understand expectations of social entrepreneur, support persons, and key stakeholders
Readiness barrier (& growth)	Lack of business education, rely upon experiential knowledge Lack of experiential knowledge Lack of business planning, using other planning in lieu of a business plan Understanding of customers and market Do not have business licence, legal entity, or see as unnecessary Marketing relies upon word of mouth and social network Fear of getting too big and not having adequate support Discrimination limits growth opportunities Lack of planning for accommodation needs Do not have access to physical space for business activities outside of home or service provider	Need accommodations in certification and licensing Need affordable business planning and education for people with intellectual disabilities Need to integrate and contextualize future planning methods used by people with intellectual disabilities Need business mentorship Need accessible financial management Need to plan for business-related access and accommodation needs Need business incubator for social entrepreneurs with intellectual disabilities
Systemic barrier	Difficult for people with intellectual disabilities to get licensing and certification Disincentives to entrepreneurship and asset limitations	Need accommodations in certification and licensing

Barrier category	Barrier experienced	Need
	Change in support when transitioning from child to adult services affects social entrepreneurship	Need to address policy regarding asset limitations and public benefits Need to better understand how transition affects social entrepreneurship
Support barrier	Reliance upon service providers and schools for employment opportunities Time constraints of key support person limit social entrepreneurs' capacity Lack of support can limit start-up and growth Working with family complexities roles and priorities Staff turnover affects formal support Overreliance upon weak ties Health concerns and living arrangement may limit social entrepreneurial capacity	Need to educate service providers and schools about social entrepreneurship for people with intellectual disabilities Need to plan for business-related support needs and allocate resources accordingly Need to better understand role of supports in start-up and growth Need to establish roles and responsibilities for family members within the business

*Responses for traditional expectations barriers were primarily given by key support persons.

The next US study also worked with eight EWDs with cognitive disabilities and their supporters (Hagner and Davies, 2002) to explore the benefits of entrepreneurship. Their businesses had grown out of genuine interests and skills, and they regarded themselves as businesspeople. Although their supports were not business oriented initially, the general consensus was that the businesses were beneficial and generated social interactions. Their businesses provided little income and some had to be subsidised. They drew support from many different sources (e.g. family, friends, charities, business assistance groups), possibly so as not to exhaust any one source. There were few opportunities to grow businesses, but most had aspirations to do this. They experienced autonomy, flexibility and doing what they enjoyed. However they had difficulties keeping records, and it took time for their businesses to get going (Hagner and Davies, 2002).

A study based in the UK considered all the stakeholders involved in 13 enterprises (Reddington and Fitzsimons, 2013). They found that businesses were primarily about quality of life and social inclusion, not income generation, particularly for EWDs with learning disabilities. This meant that most governmental support was not available to this group as it is about financial outcomes. There was a lot of enthusiasm and support from those around the EWD and there were obvious improved social outcomes, increased confidence which resulted in less dependency on others, as well as more interactions with their communities. Loss of benefits was a concern for supporters in case their EWD was too successful. Few social care professionals or employment advisers had expertise in entrepreneurialism. Financially few were able to manage without social benefits and only one had achieved this after two years. However, some had the potential to expand and these businesses were found to have business models that were simple, successful and replicable. Professional advice for such microbusinesses was recommended as it could be easy to breach, for example tax law, as these businesses would be treated the same as any other business (Reddington and Fitzsimons, 2013).

The last study of EWDs with intellectual disabilities was from Spain by authors from a university with an inclusive entrepreneurship course (Barba-Sanchez, Salinero and Estevez, 2021). Authors devised a method for analysing the financial value of a social enterprise (a compost business based on coffee grounds from a community café, 14 EWDs as cooperative owners). They found that the local museum bought all the compost which was also an avenue for the 14 EWDs to give horticulture classes to the community based at the museum. Their financial analyses showed that for every euro of public funding, the café enterprise generated at least 5 Euros. Not only was this business beneficial to the EWDs involved, this analysis showed the social potential for such enterprises financially and to the community.

The impact of another disabling condition, ADHD, was investigated by Wiklund, Patzelt and Dimov (2016) with 14 Swedish EWDs, who ranged from just starting to 30 years in business. They categorised comments into four aspects. Firstly impulsivity: this was potentially beneficial as decisions get made, increasingly based on experience of what is likely to work, which is driven by impatience, novelty seeking etc. The second was attention, passion, time commitment, and expertise: where EWDs can get totally absorbed in tasks they enjoy and ignore others, but this hyper focus leads to expertise. The third was productive action under uncertainty: they can be highly productive or take detrimental actions depending on the circumstances. The forth was around activity and energy levels: they reported a higher work

capacity, higher energy levels, and their hyper focus can channel energy. All participants thought that being an EWD allowed them the flexibility to work at a higher energy level. Authors suggested that some of the characteristics of ADHD were beneficial in the context of entrepreneurship (Wiklund, Patzelt and Dimov, 2016).

One UK study considered the intersections of identity categories as they can create complexity of disadvantage (Owalla et al., 2021). Focus groups were held with 15 EWDs, 16 BAME entrepreneurs and five interviews with policy makers. They identified typical challenges for all entrepreneurs, for example, problems accessing finance, issues establishing a new business and small size, and trying to maintain a good work-life balance. Stigma and social isolation was experienced by both groups and drove entrepreneurialism. Additionally, EWDs reported gauging how others perceived them as business owners. Both also reported a lack of role models, and difficulty accessing any networks/social movement opportunities. The support that was available, was sort term and the respondents with disabilities were often not aware of the help available. Authors suggested this should be longer term and more visible, and that policymakers should target intersections and with greater interaction with EWD organisations (Owalla et al., 2021).

The last study, from the US, was an exploration of EWDs in a virtual reality world, Second Life. The respondents did not necessarily set to become entrepreneurs, which may explain why they rarely made any profits (Boellstorff, 2019).

Table B8: Studies using qualitative methods

Authors	Subjects	Focus of study	Findings	Recommendations
Casado, 2019 + 8 others Spain	15 EWDs +families, People with disabilities not entrep. experience, Professionals who work with	Semi-structured interviews		
Ashley, 2017 US	18 EWDs, 8 women, 10 Caucasian, 9 aged 40-55 years, rest were older, 14 had partners 7 college educ, 5 masters, 4 Phd/prof.	Explored the process and experiences of becoming self-employed. Interviews	Three main categories: reasons for self-employment (Negative past work experiences, Health challenges. Last resort. Opportunity to thrive), the process of becoming self-employed (Business/educational training and assistance. Help from others. Role of the VRC), and the challenges encountered (Interference. Time Management. Networking and communicating. Managing business and its growth. Funding and financing. People-related resources). The majority of participants revealed negative and/or unhelpful interactions with vocational rehabilitation counsellors. Advice from participants was sort for vocational rehabilitation counsellors and other persons with disabilities contemplating self-employment. 9 earned less than $9000 a year, 4 earned $9001 to $90000, and 3 earned $90001 to $400000.	Self-employment should be offered as a matter of routine by counsellors. Need to understand counsellors readiness and resistance towards self-employment. Appropriate training for counsellors.
Barba-Sanchez 2019a 2019b Spain Castilla La Mancha	14 with intellectual disabilities, 9 women, students attending a course at a socially inclusive business incubator	Abono Café case study (compost from coffee grounds) to find out if a social enterprise can be monetised. Interviews Network analysis	The non-market value of business exceeds the financial value. The business was supported by an incubator specialising in the creation of social enterprises, comprising several organisations including the university. The Specific Social Value of Abono Café (347,814.00 euros) exceeds its SVA (218,734.99 euros), indicative of the social potential of this type of initiative.	Also need to factor in self-confidence and self-esteem, as well as wellbeing aspects.

Authors	Subjects	Focus of study	Findings	Recommendations
			The Integrated Social Value (566,548.99 euros) represents five times the public funding received (105,450 euros), i.e. for every euro invested by the JCCM, Abono Café generates at least 5.37 euros	
Boellstorff, 2018 US	Unclear, possibly 10	Second Life (virtual world) Comments	Similar stigmatised norms existed They did not set out to become entreps. Rarely make profits,	
Caldwell, 2020 US Chicago	7 diads, intellectually disabled (3 women, 19 to 40 years (6 were under 29 years) and their support (5 parents), mainly Caucasian	Understanding management processes interviews	Main barriers they experienced, how their businesses are organized; and the use of formal and informal services and support social entrepreneurs Excellent table of barriers and needs	
Csillag, 2019 Hungary	10 physically disabled or sight-loss, 1 woman, 26-70 years,	Barriers faced when establishing enterprises, and supporting factors in starting and running a business Interviews	Personal, business-related and society-related factors Psychological barriers (e.g. self-confidence) worse than physical – family/teachers etc. can help or hinder Lack of business education, lack of mentoring Contextual factors specific to Hungary (e.g. legal, VAT 27%, corruption) Companies get tax benefits for employing disabled, but self-employed disabled do not. Society not supportive. Entrepreneurial mind-set lacking in Hungary generally (cf US) Identity: entrepreneur first, disabled second Family/friends helping not sustainable, pay for assistance. Separating home and work. Businesses were not capital intensive (no financial support available for disabled)	sharing experiences, providing role models and encouragement between entrepreneurs both disabled and able bodied
Hagner, 2002 US New England	8 business owners with cognitive disabilities (7 businesses) 6 women,	Why self-employment, benefits – personal and financial, what support	Start-up based on existing interests/skills; little financing (from family/donations, 4 had some business training, often had business support from local organisations, no employees. Most were part-time 20 hours, some more. Support	Honour the choices and preferences of the business owner.

Authors	Subjects	Focus of study	Findings	Recommendations
		Interviews (included support workers)	providers (mostly agency were present a lot of the time – none had an interest in business) felt that the business added to their jobs beyond the original remits. Business ownership was a delicate balancing act. Businesses provided little income and some had to be subsidised. Little opportunity to grow businesses. More business knowledge? And supporters more interested in business. Autonomy and flexibility good and doing what they enjoyed. Difficulties: keeping records, time for businesses to get going. Generated social interactions,	Self-employed individuals should be free to disregard advice that leads them away from their own personal vision of their business.
Harris, 2013 US Chicago Community Resource Assessment	27, EWDs, 14 women, 18-65 years, ethnicity (44% Caucasion, 33% African American, 19% Hispanic) and education (15% some college, 33% bachelors, 44% grad degree) 19 stakeholders (people in supporting roles for EWDs)	Self-employment vs entrepreneur Social entrepreneurship Focus groups (27) Interviews (19)	1) Education, training and information; some self-taught, no one mentioned gov programmes (most were unaware of them), needed business ed and beyond start-up phase. Need to know what impacts on state benefits (recipients and stakeholders) – major barrier. Rely on internet for info. 2) Finance, funding and asset development; Lack of this influences what types of business – nothing with upfront capital. Many entreps do not manage their own money (lack training) so disincentive. Training in financial literacy offered but not known about by entreps. 3) Networking and support: crucial with and without disabilities. Formal- not known about or not helpful, informal crucial. Access to disabled mentors very desirable.	Potential for business and job creation via social entrepreneurship. Still a reliance on traditional employment models, which may or may not be appropriate.
Jammears, 2018 Belgium	15, physical and sensory impairments	Entrepreneurial identities Interviews	Proposed 4 aspects to identity; 'archetypal entrepreneur': emphasising personal characteristics 'unique entrepreneur thanks to one's physical impairment': constructing physical impairment as a unique entrepreneurial opportunity 'entrepreneur by default': start a business largely out of necessity	Many legal barriers prevent people from taking up self-employment out of fear of permanently losing social benefits. Little space is provided for people with disabilities to 'try out' an

Authors	Subjects	Focus of study	Findings	Recommendations
			'collective entrepreneur': stressing heterogeneous skills and mutual dependencies between individuals	entrepreneurial identity, making it a 'too risky' project.
Jammears, 2020 Belgium	31 physical and sensory impairments	Illustrations of the 4 identities above Interviews	Adopted the lens of identity positioning: emphasized EWDs' agency in the construction of the self + the heterogeneous character of their work identity. Two positions identified: the archetypical and the unique entrepreneur –reaffirm the individualistic, heroic 'entrepreneurial self' in control of his or her destiny, and two – the fallback and collective entrepreneur – rather question it.	Promoting more inclusive understandings of entrepreneurship and taking into account different embodiments.
Jammears, 2021 Belgium	40 physical and sensory impairments, 13 women, 20 – 60+ years, 26 at least a bachelor degree	Comparison of general businesses and those for the disable; and born with or acquired disability Interviews	Overcoming the impact of disability was useful for developing business traits (e.g. perseverance, wanting to prove oneself, motivation etc.). Disabled-based business thought disability added.	Perceptions about people with disabilities need changing at societal level. Financial research into whether disabled-based businesses further marginalise EWDs.
Kasperova, 2018 UK	3 adult acquired disabilities, 1 woman, 44-55 years old	Entrepreneurial identity Interviews	Development of a framework to assess identity for all entrepreneurs, but designed for those with disabilities. Framework with three layers, entrepreneurship driven by causal power.	
Kasperova, 2021 UK	42, 17 women, 18-61+ years	How disabled entrepreneurs gain legitimacy with customers, focus on visibility of impairment Interviews	Revealing impairment and conforming to a mainstream market; (ii) Revealing impairment and selecting a niche disability market; (iii) Revealing impairment and transforming a mainstream market; and (iv) Passing for 'normal' and conforming to a mainstream market. Disability as a form of symbolic capital enables entrepreneurs to position themselves as experts in the field able to empathize with customers who share their experience of disability.	How disabled entrepreneurs build legitimacy with employees, finance providers and others.

Authors	Subjects	Focus of study	Findings	Recommendations
			Some entrepreneurs intentionally reveal their impairment to communicate that expertise and empathy. For others, perceptions of stigmatizing customer attitudes or anticipated discrimination can motivate deployment of various concealment and normative tactics to meet mainstream customers' expectations.	
Maritz, 2016 Australia	2, 1 woman Blind and paraplegic	2 case studies	Both experienced difficulty in getting funding. Both thought they were discriminated against despite robust business plans. Both have 2/3 employees. 1 believes blindness was a catalyst for business. 1 developed a business from their previous employment.	Business training and support services need to be inclusive. Need raised awareness for people with disabilities to become interprets.
Ng, 2019 UK	2 blind, one paraplegic, serial entreps	Barriers for blind entreps. Interviews and observations	These blind entrepreneurs created ventures that leveraged public perceptions of blindness and disability. They drew on distinctive attributes of their physical and social challenges as a means of exploiting narrow conceptions of disabled people's capabilities. The subsequent discussion offers research opportunities in and beyond challenge-based entrepreneurship by considering a number of theoretical and practical implications of the adaptive skills and attributes of our entrepreneurs that have enabled them to engage with popular "ableist" and medical, or "tragic", perceptions of disability in original and positive ways.	Explore what triggers entrepreneurship. Identify attributes that result in success.
Norsted, 2022 Sweden all	16: 10 self-employed with disabilities, + 6 visually impaired, aged 20-70 years	Barriers Interviews and focus group	Unintended barriers: Found regulations too rigid; e.g. did not use start-up grants due to the restrictions and payback rules. Financial support for EWD means more admin and monitoring creates work for them, + they felt regarded with suspicion when justifying their claim. Barrier to recognition - existing networks and supporting functions for self-employed do not appreciate needs of EWDs, so difficulty accessing networks (including physical	EWDs need to be more visible. Policy makers need to understand the issues for EWD more and not create well intended, but miss-placed policies.

Authors	Subjects	Focus of study	Findings	Recommendations
			barriers) and not fitting in with cultural images of self-employed (white, male, hero) which can lead to further social exclusion.	
Owalla, 2021 UK Sheffield	15 EWDs, 5 women in focus groups, 16 BAME entreps, 11 women, 5 policymakers in interviews	Intersections, ethnic minorities and EWDs Focus groups and interviews	Identity categories can create extra layers of disadvantage when they intersect. EWDs gauge others perceptions of them. Lack of role models, lack of network/social movement opportunities. Short term nature of support and disabled less access means often not aware of help available. May be support in beginning but longer term needed.	How does psych burden of prejudice, discrimination, exclusion and stigmatisation impact on entrepreneurship? Policymakers should target intersections and with greater interaction with EWD organisations.
Reddington, 2013 UK	EWDs with learning disabilities, support workers, health and social care professionals, family members	Microenterprises: are they a suitable alternative for people with learning disabilities Mixed methods	Businesses were primarily about quality of life and social inclusion, not income generation. Most governmental support is about financial outcomes. Few people had experience of employment but 2 examples of negative experiences. Supporters around their (self-determined) EWD were all enthusiastic. Families very supportive, only concern was any impact on social security benefits. Few social care professionals or employment advisers had expertise in entrepreneurialism. Income levels were varied - Typically, being busy and doing something worthwhile was perceived as more important than income. One enterprise had managed to move away from benefits after 2 years. Some had been successful in getting small amounts of funding when using the social enterprise route. Development of business is too slow for business funding. Excellent social outcomes. Increased confidence resulted in less dependency on others. Interactions with community.	Professional advice required as easy to breach laws, microenterprises treated as any other businesses. Generally funding is not available to these businesses – need to recognise social benefits to these EWDs.

Authors	Subjects	Focus of study	Findings	Recommendations
			Some businesses had business models that were simple, successful and replicable.	
Wiklund, 2016 Sweden	14 entreps with ADHD, 5 women, 20s – 60s	Impact of ADHD on entrepreneurship Interviews	Considered 4 aspects. 1 impulsivity: potentially beneficial as decisions are made (learn over time what is likely to work), driven by impatience, novelty seeking etc. 2 attention, passion, time commitment, and expertise: can get totally in tasks they enjoy and ignore others, hyper focus leads to expertise. 3 productive action under uncertainty: can be highly productive or detrimental depending on circs. 4 activity and energy levels: higher work capacity, higher energy level; hyper focus can channel energy	Consider positive aspects of conditions such as ADHD.

Table B9: Other Potential Studies (publications were not available in time)

Authors	Subjects	Focus of study	Findings	Recommendations
Caldwell, 2012 US	Intellectual and developmental disabilities (IDD).	conceptual tools	Tools addressed can inform the way that researchers, policymakers, and practitioners approach complex issues, such as social entrepreneurship, to improve communication among disciplines while retaining an integral focus on rights and social justice by framing this issue within citizenship theory.	Society takes care not to perpetuate existing models of oppression, particularly in regard to the social and economic participation of people with IDD
Caldwell, 2016 US	EWDs Key stakeholders	Motivational and attitudinal factors influencing social entrepreneurship for people with disabilities Focus groups Interviews	Findings indicate that despite social entrepreneurship having been promoted as a strategy for circumventing employment discrimination, the individuals with disabilities in this research continued to encounter attitudinal barriers and discrimination affecting their employment decisions.	Future research - interrogating what might be gained in the spaces where need and opportunity intersect and exploring the extent to which motivations overlap for social

Authors	Subjects	Focus of study	Findings	Recommendations
				entrepreneurs with disabilities in theory, policy, and practice.
Caldwell, 2020 US	Intellectual and developmental disabilities (IDD).	motivations of people with ID who are participating and supported in social entrepreneurship Interviews	.n exploring these motivations, this article investigates push-pull factors, the role of the social mission, and how support influences motivation.	
Darcy, 2022 Australia	60 EWDs	journeys of entrepreneurs with disability (EwD) framework	With the findings examining their motivations, barriers, enablers, outcomes and benefits. The discussion examines the social, economic and cultural embeddedness of EwD's journey, the paradox of their higher rates of entrepreneurship than the nondisabled and the entrepreneurial ecosystem. We conclude by outlining the contribution this study makes to disability entrepreneurship through the complexity revealed by the social ecological framework.	
Dotson, 2013 US	Young adult EWDs with developmental disabilities	Evaluated a behavioural teaching procedure on skills related to self-employment	Results suggest that the teaching procedure was effective in teaching three broad classes of skills related to many self-employment possibilities, the skills generalised to the natural environment, and peer pairs supported each other to complete tasks with a high degree of accuracy required to run a recycling business. This study represents an initial demonstration that adults with DD can learn skills required to run their own business.	
Hsieh, 2019	13 EWDs,	Understanding of the relationship between challenges and the adaptive mechanisms that led to business and personal attainments	Based on our empirical findings, we propose a new challenges-adaptive mechanisms-results (CARE) model contributing to the literature on disabled entrepreneurship among those with impairments and also provide insights into the entrepreneurial endeavours of the disabled population.	
Parker Harris 2014	EWDs and key stakeholders working	Broader factors influencing SE for people with disabilities.	Looked at intersection of disability studies and entrepreneurship to explore which factors influence the potential for SE to provide equal participation opportunities	

Authors	Subjects	Focus of study	Findings	Recommendations
US	in the fields of policy, disability, and business	Focus groups	for people with disabilities in the labour market. Findings suggest that further consideration of political-economic and socio-cultural factors is needed if we are to better understand the potential of SE for people with disabilities.	
Perez-Macias, 2022 Spain	No details	Factors influencing entrepreneurial intentions of people with disabilities. 9 Focus groups 1 interview 7 questionnaires	The results showed that self-realisation, the search for autonomy, freedom, and independence are critical factors that affect the decision of people with disabilities to become entrepreneurs. The results also highlight the lack of business culture in Spain, the need for support from family and friends, and the necessity to create a network of contacts for people with disabilities to feel included. Education plays a key role in overcoming the differences with respect to people without disabilities. The findings also suggest that specific legislation or action plans are needed in Spain to promote entrepreneurship among people with disabilities. Points of interest This study shows the personal and contextual factors that influence the entrepreneurial intentions of people with disabilities in Spain. Data collected via video conferencing platform. This shows the role played by digital tools in the inclusion of people with disabilities. This research concludes that entrepreneurship makes people with disabilities feel free and independent and increase their self-fulfilment when they see their contribution to economic development.	There is a lack of entrepreneurial culture in Spain, and institutions should undertake measures to promote not only the entrepreneurial spirit but also the full integration of people with disabilities. Such studies are important in order to boost entrepreneurship among people with disabilities.

Studies from other countries not included

These studies are referenced with their abstracts below (Table B10). A brief overview analysis showed that they fell into two groups. Firstly, these included studies that were similar to the included developed countries and investigated topics such as psychological characteristics (especially self-efficacy), their support needs and challenges (starting and maintaining a business), training/education, discrimination (two studies addressed as a sole topic which may indicate it's greater significance in developing countries), legislation and programme evaluation. These would be unlikely to provide additional findings to those documented in the academic review. The second group included individual studies that considered topics that were more about developing country issues such the usefulness of a three-wheel bike, the influence of religious beliefs on business, ability to use/access to the internet and mobile phone use in blind masseurs.

Table B10: Articles not included and their geographical locations (with abstracts)

Country	Article
Brazil	Lamont, B. T., Patel, P. C., & Richter, J. I. (2022). Self-employment, income, and poor with disabilities: the 2016 inclusion of people with disabilities act in Brazil. *Applied Economics*, 1-14. We exploit the implementation of the Inclusion of People with Disabilities Act in Brazil in early 2016 and use stigma theory to focus on the poor with disabilities, a double-stigmatized group, in a developing country setting. We hypothesize after the passage of the law, the poor with disabilities will pursue more self-employment than employment, but their income will remain low, with only the income of the employed improving. Contrary to expectations, the results show that the odds of self-employment were not higher than employment after the law. But as predicted, only the income of the employed improved, with the income gap between the employed and self-employed with disabilities growing wider after the passage of the law. The findings demonstrate that the law mainly benefitted the poor with disabilities who were able to gain employment but not the self-employed.
China	Lin, Z., Zhang, Z. A., & Yang, L. (2019). Self as enterprise: digital disability practices of entrepreneurship and employment in the wave of 'Internet+ disability' in China. *Information, Communication & Society*, *22*(4), 554-569. Situated in China's neoliberal context and its rapid development of information communication technologies (ICTs), this study aimed to examine how disabled people in China transformed themselves into new self-enterprising subjects in the wave of 'Internet + Disability.' In order to answer this question, this study tried to develop an analytical framework to illustrate the disability practices that situated in the ICTs and neoliberal context, underpinned by the discourse of 'self as enterprise,' and demonstrated by the practices of entrepreneurship and employment. Based on the research design of case studies and methods that included ethnographic participant observation and in-depth interviews, this study explained how a disabled entrepreneur, Mr. Yuan, took advantage of the wave of 'Internet + Disability' to realize his dream of entrepreneurship and face the uncertainties of a precarious entrepreneurship. It also explained how Mr. Yuan's employees achieved their dreams of employment but suffered the precariousness of enterprising subjects.
Ecuador	Beisland, L. A., Mersland, R., & Zamore, S. (2016). Motivations for Business Start-up: Are There any Differences Between Disabled and Non-disabled Microfinance Clients?. *Journal of International Development*, *28*(1), 147-149. We use an Ecuadorian sample to investigate if there are differences in motivations for business start-up between persons with and without disabilities. Generally, we do not document significant differences. The reason might be that we use a sample selected among customers of the microfinance

Country	Article
	bank D-MIRO. Without targeted incentives disabled microfinance customers must resemble nondisabled customers. Gallegos-Erazo, F., & Salas-Díaz, D. (2019). Business-Career Transition of Poor People with Disabilities in Ecuador. *International Journal of Interdisciplinary Social and Community Studies*, *14*(1), 13-35. The objective of this study was to explore the business-career transition of people with disabilities. Through multiple case studies in Ecuador, the present study highlights the career obstacles to the venture of being a businessman. Those obstacles are derived from the impediments caused by poverty and disability. The effective management of this type of transition seems to come from a sense of strengthened coherence, self-esteem, vision, determination, and experience that the individual has. Those, together with environmental factors such as family and governmental support, propel entrepreneurship. The reasons for undertaking are out of necessity, desire, or use of opportunities, which allow the person to establish a new career, enabling social integration and wellbeing.
Ghana	Bukari, S., Quarshie, M.A. and Opoku, F.K. (2021), "Exploring the perspectives of physically challenged women entrepreneurs in the Sekondi-Takoradi Metropolis, Ghana", *Journal of Enterprising Communities: People and Places in the Global Economy*, Purpose Entrepreneurship and disability are discordant because of the assumption that the former is only meant for non-disabled people. Drawing on the capability, agency/structure and social exclusion theories, this study examines the lived experiences of physically challenged women entrepreneurs in the Sekondi-Takoradi Metropolis, Ghana. Design/methodology/approach The study used a qualitative approach, involving in-depth interview and observation to solicit the views of six physically challenged women entrepreneurs in the Metropolis. Findings The study found that the physically challenged women consider themselves as women with entrepreneurial minds, capable of actualising and achieving their entrepreneurial wellbeing, by functioning and proving their capabilities and having the capacities to choose and act independently. The study also found that the structures (physical self, socio-economic, cultural and attitudes, etc.) that confront the women reinforce their capabilities as physically challenged women entrepreneurs. It further found that for these women, being a physically challenged woman entrepreneur demands that one should have self-belief capabilities and being high self-esteem regardless of one's challenges. Originality/value The study is an original submission that makes contributions towards understanding and appreciating the perspectives and lived experiences of capable physically challenged women entrepreneurs in a developing country. There have been studies on women entrepreneurs in Ghana but not specifically on physically challenged women entrepreneurs. This study addresses that gap.
India	Uddin, M. A., & Jamil, S. A. (2015). Entrepreneurial barriers faced by disabled in India. *Asian Social Science*, *11*(24). India has witnessed high economic growth rates in the past two decades and there has been a remarkable increase in the per capita income. But unfortunately many sections of the Indian population still remain economically deprived. Disabled persons though constitute a small part of the Indian population but their relative numbers are growing. Disabled lag behind in terms of education and employment which results in poverty. For equitable distribution of wealth and prosperity among all sections of population inclusive growth is necessary. The challenge is therefore not only to achieve higher economic growth rates but also to focus on economic inclusion so that all sections of the society are able to take advantage of opportunities. Promoting entrepreneurship among the disabled is a way to achieve faster and better economic integration. This paper highlights the barriers faced by entrepreneurs with disabilities. Also the paper tries to find out if these barriers are different than those faced by other entrepreneurs. Finally this paper highlights what steps can be taken to prevail over the various types of barriers being faced by disabled entrepreneurs.

Country	Article
	RAJAMOHAN, D., DEVI, E. S., & SATHISH, A. (2020). Barriers Of Differently Abled Entrepreneurs In Sivaganga Districts: A Factor Analysis. *International Journal of Scientific & Technology Research*, *9*(2), 3990-3993. Entrepreneurship is becoming a popular term. At the same it is not possible for everyone to become successful in doing business. People with disabilities can also start their business. They are stressed to compete with the normal people. Differently abled people can successfully run their business. These people encounter with numerous physical and mental challenges and barriers to their business environment such as shortage of funding, lack of self-management, lack of experience and so on. This paper highlights about the barriers faced by the differently abled entrepreneurs in Sivaganga districts. Through factor analysis, five factors were explored such as financial barriers, skill-based barriers, perceptional barriers, motivational barriers and individual barriers. Saxena, S. S., & Pandya, R. S. K. (2018). Gauging underdog entrepreneurship for disabled entrepreneurs. *Journal of* Enterprising *Communities: People and Places in the Global Economy*/ Purpose: In the past decade, entrepreneurship research has evolved with the contribution of different scholars, but there is a lack of studies available that focused on entrepreneurship with disabilities. The objective of the research is understanding differently abled entrepreneurs and their entrepreneurial journey. How challenges caused by disability contribute to motivate them to pursue entrepreneurship as a career. This study is based on "Underdog entrepreneurs: Challenge-based entrepreneurship model" theoretical model proposed by Miller and Breton-Miller (2017). Design/methodology/approach: This qualitative research includes case study methodology to study eight differently abled entrepreneurs. All the identified cases are located in the city of Ahmedabad, Gujarat, India. In-depth interviews and multiple visits were scheduled to collect the data. Transcripts of the interview and observation notes were developed for the analysis of the content according to the adopted theoretical model. Findings: Differently abled entrepreneurs show similar traits as the non-disabled entrepreneurs. They are also found to be more resilient and persistent while dealing with the challenges of failure, stress and uncertainty. Difficult conditions and experiences of discrimination indirectly prepare them for tackling challenges while pursuing entrepreneurship. People close to differently abled entrepreneurs play a critical role in shaping and supporting their ventures. Research limitations/implications: Owing to the lack of authentic information available on disabled entrepreneurs, the study does not include different entrepreneurs with more disabilities such as hearing impairment, speech impairment and mental illness. The study also focuses on the entrepreneurs of Ahmedabad City, Gujarat because of the similar reason. Originality/value: This paper is an original submission and contributes towards understanding the differently abled entrepreneurs.
Indonesia	Syahid, Z. F. A., Fauzia, Z., Marzuq, F. N., Machfiroh, R., & Asumia, I. A. (2017). Empowering Self Potential in the Enhancement of Business Management for People with Disabilities in Bandung. *Advanced Science Letters*, *23*(11), 10774-10776. Based on the Indonesian Federal Law No. 8 of 2016 chapter 11 about disability and Indonesian government target about independency of people with disabilities enhancement in 2018 being the focus of this research. In addition, Department of Micro, Small, and Medium Business of Bandung City Governments have target to establish 8000 new entrepreneur in 2017. This conditions are being the background of this research with objective to enhance business management capability and competency for people with disabilities in Bandung. This research was using qualitative method that comparing the condition of people with disabilities regarding with business management knowledge before and after the counselling program. Respondents were gathered from eight members of BILIC (Bandung Independent Living Center) that already have run their business. The method for gathering

Country	Article
	the questionnaire data of pre-test and post-test data have been done after the respondents attended the counselling program in Empowering Business School (EBS) Program. The result are, comprehension in four business aspects after the counselling being conducted; character building, goal setting, marketing, and financial management are found increasing from 69.83 percent to 87.33 percent. This research gives an impact for the development of entrepreneurship in Bandung. Moreover, the limitation that being have by people with disabilities which becoming a common paradigm in society, on the contrary can be a potential sector for the government to achieve their target.
Iran	Bagheri, A., & Abbariki, M. (2017). Competencies of disabled entrepreneurs in Iran: implications for learning and development. *Disability & Society*, *32*(1), 69-92. This qualitative research set out to explore competencies of disabled entrepreneurs by presenting their lived experiences in developing their capabilities to create and manage their own business. The research also aimed to identify the dimensions and components of entrepreneurial competencies of disabled entrepreneurs. The participants were 16 entrepreneurs with physical and mobility disabilities, four educational managers of disabled vocational education and rehabilitation centers, and four entrepreneurship academics. Our findings suggested that the disabled entrepreneurs possess specific personal and functional entrepreneurial competencies. Personal competencies include attitudinal competencies, entrepreneurial self-efficacy and entrepreneurship learning self-efficacy. Functional competencies encompass entrepreneurial competencies, commitment and social competencies. Moradi, A. (2013). Share of Self-Efficacy, Achievement Motivation and Self-Esteem in Predicting Entrepreneurial Behavior in physically disabled females. *Advances in Environmental Biology*, *7*(8), 1795-1803. Objective: Purpose of this study was to determining the share of self-efficacy, achievement motivation and self-esteem in predicting entrepreneurial behaviour in physically disabled females. Method: The design of the present study was a predictive correlation. The sample consisted of 80 female members of Disabled Community in Isfahan City who had 18-36 years old and participated in questionnaire completing call voluntarily. Entrepreneurial behaviour scale, general self-efficacy scale, Hermans achievement motivation questionnaire, and Rosenberg's self-esteem scale was used for data collection. Descriptive statistics and stepwise regression was used for data analysis. Results: Results of stepwise regression showed that self- efficacy can significantly predict the rate of entrepreneurial behaviour in physically disabled females (P=0.00), and adding achievement motivation can increase significantly the predicting power of their entrepreneurial behaviour (P=0.00); but adding self- esteem variable to self- efficacy and achievement motivation variables can't increase significantly the predicting power of entrepreneurial behaviour in these subjects. Conclusion: Self-efficacy and achievement motivation have an important role in explaining entrepreneurial behaviour in physically disabled females.
Israel	Perez-Vaisvidovsky, N., & Aviram, U. (2019). The rehabilitation of the mentally disabled in the community act in Israel: Entrepreneurship, leadership, and capitalizing on opportunities in policy making. *International Journal of Law and Psychiatry*, *66*, 101457. This paper examines the role of policy entrepreneurs in the formation of a rehabilitation program in the field of mental health in Israel, shedding light on their role in general and specifically in mental health policy formation. Our research is based on a historical case study. The legislation process was examined through interviews with key actors in the legislative process and archival materials. While in general our findings reinforced existing literature, our research also revealed new information on several topics: organizations as policy entrepreneurs; inter-sectorial coalitions of entrepreneurs; and possible problems arising from the concept of 'leadership by example'.

Country	Article
Kenya	Metts, R.L., Oleson, T.(1995). Assisting disabled entrepreneurs in Kenya: implications for developed countries. *Small Enterprise Development* 6(4), pp. 23-33. Disabled people worldwide face barriers to formal employment. One possible solution for disabled people with entrepreneurial skills is self-employment. The establishment and expansion of small businesses by persons with disabilities, however, tends to be restricted by limited access to credit markets and by inadequate business training. This article focuses on a UNDP-funded and ILO-administered business training and credit guarantee scheme established in Kenya to facilitate informal sector self-employment for disabled microentrepreneurs. The sense of independence and self-esteem derived from such schemes make them of interest to disabled people in developed as well as developing countries, and the article includes recommendations for establishing self-employment schemes in developed countries.
Malaysia	1. Abbas, L. N., and S. N. Md Khair. (2017). "Entrepreneurial Intention among Special Needs Students. Pertanika Journal of Social Sciences & Humanities, 25(May) pp 57-66. The involvement of the disabled in entrepreneurship is low. Many initiatives have been made by the government to increase the participation of the disabled in the business field. Entrepreneurship courses are introduced to the disabled as early as primary- and tertiary level education. This study investigates entrepreneurial intention among special needs students. The respondents of this study were 90 special needs students from polytechnics in Malaysia. This study employed components of the Theory of Planned Behaviour (TPB). Descriptive analysis found that entrepreneurial intention among special needs students is high. T-test and One Way ANOVA analyses reported that a significant difference in entrepreneurial intention between the genders and courses taken in university. This study suggests that the management of polytechnics should provide resources to the polytechnics pertaining to entrepreneurship among special needs students. 2. Abdullah, S., Bakar, A. A., Rozali, N., Mutalib, S. A., & Hussin, N. S. (2020). Qualitative study: The first stage of starting a business for entrepreneurs with disabilities. *Journal of Critical Reviews* 7(6), pp. 500-504. The People with Disability (PWD) are a part of the agents that can contribute to the development and sustainability of the country's economy. Encouraged through entrepreneurship in the entrepreneurship field can make a significant impact on this group and indirectly on the country. The main purpose of this article is to discuss two objectives of the study, namely to identify the impetus experienced by entrepreneurs with disabilities in starting a business and to understand the situation experienced by people with disabilities in starting a business. Therefore, this study was conducted through a qualitative method using a semi-structured interview approach involving eight informants comprising entrepreneurs with disabilities to obtain research information. 3. Ahmad, J., Sze Jia, C. L., Wei, T. W., & Aziz, F. A. (2021). User Acceptance Of 'Okue' Mobile Entrepreneurship Application For People With Disabilities. In C. S. Mustaffa, M. K. Ahmad, N. Yusof, M. B. M. H. Othman, & N. Tugiman (Eds.), Breaking the Barriers, Inspiring Tomorrow, vol 110. European Proceedings of Social and Behavioural Sciences (pp. 449-457). No abstract 4. Amin, A.S., Selamat, M.N., Aun, N.S.M., (...), Wan Abdullah, W.A., Isaruddin, M.B. (2020). Specific requirements of youth with physical disabilities in online business. International Journal of Psychosocial Rehabilitation 24(4 Special Issue 1)

Country	Article
	Disabled people often argued to have a lower socio-economic level than non-disabled as a result of low access to health, transport, education, employment and information, especially in developing countries such as Malaysia. To overcome these employment challenges, disabled people especially youth with physical disabilities, should be encouraged to adopt the self-employment approach such as online business to generate income. Therefore, this article aims to identify the specific requirements in online business for youth with physical disabilities. This research employed a quantitative (survey) method. An online survey was conducted on 101 youths with physical disabilities in Malaysia to identify their specific requirements in online business. This research used descriptive analysis using values such as mode, median, mean and percentage to indicate the results of a given data. There are two types of needs for youth with physical disabilities in online entrepreneurship which were skills and support requirements. The results showed that there were six skills needed such as photography techniques, business management, financial management, business planning, marketing techniques and customer service management. Also, there are four support needs, namely, financial support, business knowledge support, skills support and social support. The findings have implications for those working with disabled people to design specific programs that fulfil the specific requirements of youth with physical disabilities in online business. Nordin, N., Nordin, N., Nordin, N. I. A., Nordin, N. F., & Ewan, E. E. (2022). The Needs Analysis for Development of Smart 3-wheel Bike for Disabled Entrepreneurs. In *International Conference on Business and Technology* (pp. 859-871). Springer, Cham. The purpose of this study is to examine entrepreneurs with disabilities' views towards the need for technical support. The Unified Theory of Acceptance and Use of Technology (UTAUT) were used as a basic model for study. A survey method was utilized among 40 respondents in Tumpat Kelantan, Malaysia that categorize as disabled entrepreneurs to investigate their technology needed. The data obtained were analyzed using Statistical Packages for the Social Sciences (SPSS) software for descriptive statistics and regression analysis. The findings indicate that the most significant factor is effort expectancy that show the disabled entrepreneurs accept the development of Smart 3-Wheel Bike, which enable them in competing with the other business competitors and remain in the market. Rozali, N., Abdullah, S., Hussin, N. S., Jamaluddin, J., Mahmood, A. F., & Mokhdzar, Z. A. (2021, July). Approach to qualitative study methods: Exploration of support received by entrepreneur with disability. In *AIP Conference Proceedings* (Vol. 2347, No. 1, p. 020300). AIP Publishing LLC. Support is one of the most important elements for a disabled entrepreneur to grow a business. However, this support is not only financial in nature but consists of various other needs. In fact, the support medium is not only the government but also NGO and others. The main purpose of this article is to discuss the objective of the study, which is to explore the support received by entrepreneurs with disability to grow the business. The second objective is to understand the situation experienced by people with disabilities in start business. Therefore, this study was conducted through qualitative methods using a semi-structured interview approach involving 8 informants consisting of disabled entrepreneurs to obtain research information. Talib, R. I. A., Sunar, M. S., & Mohamed, R. (2019, December). Increasing the Representation of People with Disabilities in Industry 4.0: Technopreneurship, Malaysia Perspectives. In *International Summit Smart City 360* (pp. 463-473). Springer, Cham. In this paper, we argue that the advancement of technology in Industry 4.0, which covers growth areas such as big data and machine learning, cybersecurity, digital currencies, block chain and the

Country	Article
	Internet of Things (IoT), with expected creations of new job opportunities in the areas of Cyber Security, Data Analytics, Network & Infrastructure and Software Development that can easily be done at home, has produced an ideal scenario in the context of job opportunities for People with Disabilities (PWDs). Under the Eleventh Malaysia Plan (2016–2020), more programs are currently being implemented to empower productive PWDs. These also include greater accessibility to basic education and skills training, one of it being entrepreneurship, to build relevant skills among PWDs so that they are able to compete in the open market either as employees, self-employed individuals or entrepreneurs.
Nepal	Mauksch, S. (2021). Being blind, being exceptional: work integration, social entrepreneurship and the reimagination of blind potential in Nepal. *Disability & Society*, 1-20. In this article, I investigate how social enterprises identify the talents of groups of disabled people and match them to a market demand. Through the study of a blind massage enterprise in Nepal, I undo the workings of an ambivalent form of entrepreneurship that presents disabled people as gifted. I explore shifts that evolve from the selective inclusion of individuals based on stereotyped qualities associated with their bodily condition – in this case, blindness and an exceptional sense of touch. While the therapists cultivated tropes of overcoming, they also used their elevated social position to engage in new forms of imagining that transcended negative framings of blind people in Nepal. The case invites a nuanced critique of selective integration that considers how individuals redistribute their gained advantages at a collective level. My research produces knowledge on inclusive employment in the Global South, illustrating how entrepreneurial interventions impact on perceptions of disability.
Nigeria 6 papers have the same first author despite being listed under three different names	Anih, H. (2014). Assessment of the challenges in entrepreneurship development of the disabled in primary schools in enugu education zone: implications for development. In *INTED2014 Proceedings* (pp. 296-302). No paper link available Dakung, R. J., Munene, J., Balunywa, W., Ntayi, J., & Ngoma, M. (2019). Developing disabled entrepreneurial graduates: a mission for the Nigerian universities?. *Journal of Research in Innovative Teaching & Learning*. Purpose – The purpose of this paper is to investigate the role of universities in preparing disabled students to become entrepreneurially inclined after graduation with the aim of developing an entrepreneurial inclination (EI) model. Design/methodology/approach – A cross-sectional survey was employed using 220 disabled universities' students in the north-central Nigeria. Data were analyzed using descriptive statistics, correlation analysis and structural equation model. All analyses were performed using SPSS version 22 and AMOS version 22. Findings – The findings buttress the significant position of universities in promotion entrepreneurial spirit. It revealed that the university's role (UR), entrepreneurship education (EE) and role models (RMs) have a positive influence on disabled students' EI. Universities that make provisions for entrepreneurship infrastructure, knowledge and RMs to disabled students will boost their EI. Second, the more lecturers and RMs inspire students, method of teaching and demonstrating enthusiasm are applied in the teaching of entrepreneurship, the better it prepares students for entrepreneurial career after graduation. Research limitations/implications – The study is only restricted to Federal Universities in the North-Central Nigeria. Further research could be conducted to cover other tertiary institutions in North-Central Nigeria. Furthermore, the study employed the cross-sectional approach. A longitudinal approach should be employed to study the trend over a period of at least two years. Finally, the factors identified in triggering EI may not be sufficient enough in explaining the phenomenon. There are other factors that may contribute in influencing EI of the disabled students that were not part of this study. Practical implications – This study indicates a number of implications for the universities and policy makers. Specifically, EE, UR and RMs make significant contributions to inclination for disabled students. These factors are key for universities in Nigeria to consider in preparing these students to

Country	Article
	become entrepreneurial graduates. Policy makers and other stakeholders need to develop keen interest in designing entrepreneurship curriculum to accommodate the specific needs of students with disabilities. Originality/value – This study is the first in Nigeria to empirically test the relationship between UR, EE and EI as well as the moderating effect of RMs among universities' disabled students. Keywords Entrepreneurship education, Role models, Entrepreneurial inclination, University's role. Dakung, R. J., Munene, J. C., Balunywa, W., Orobia, L., & Ngoma, M. (2017). Self-employability Initiative: Developing a Practical Model of Disabled Students' Self-employment Careers. *Africa Journal of Management*, *3*(3-4), 280-309. This study investigated the self-employability initiatives of disabled university students by presenting a model that would allow the concept to be explained and used easily as a framework for working with students to develop their self-employment careers. A cross-sectional survey with a quantitative method constituted the study's research design. A sample size of 254 university students was determined using the Krejcie and Morgan (1970) sample size selection model. Data were analyzed using demographic statistics, correlation analysis and the structural equation model (SEM). The results revealed that entrepreneurship education, action mechanisms and university role have a positive influence on the self-employability initiatives of disabled students. The results also indicated that action mechanisms mediate the relationship between entrepreneurship education and the self-employability initiatives of the disabled students in this study. Universities that provide enabling premises for disabled students, foster the development of networks and provide them access to coaches, mentors and research results will trigger the self-employability initiative of disabled students. This study indicates a number of implications for tertiary institutions and policymakers, particularly that entrepreneurship education and the role the university plays make significant contributions to the self-employability initiative of disabled students. Policymakers need to design entrepreneurship curricula that will be appreciated by students with disabilities. Dakung, R. J., Orobia, L., Munene, J. C., & Balunywa, W. (2017). The role of entrepreneurship education in shaping entrepreneurial action of disabled students in Nigeria. *Journal of Small Business & Entrepreneurship*, *29*(4), 293-311 This study adopted a cross sectional descriptive research design to examine the role of entrepreneurship education in shaping entrepreneurial action (EA) of disabled students of the Nigerian tertiary institutions. Also, an analytical survey with mixed methods and triangulation focus constituted the study's research design. A sample size of 286 disabled students was determined using Krejcie and Morgan sample size selection model. Data were analyzed using descriptive statistics, zero-order correlation and hierarchical regression. The findings revealed that pedagogy, course content and entrepreneurship education are significant predictors of EA. Entrepreneurship education that exposes students to life applicable issues is capable of boosting their confidence/capacity to risk into venture start-up. Second, the more lecturers' characteristics such as inspiring students, method of teaching, being approachable and displaying enthusiasm are applied in the teaching of entrepreneurship the better the EA of the students. This study indicates a number of implications for the tertiary institutions and policy-makers. Specifically, entrepreneurship education, pedagogy and course content make a significant contribution to EA for disabled students. This is a critical factor that tertiary institutions in Nigeria should consider in transmitting entrepreneurship knowledge to students. Policy-makers and other stakeholders need to develop keen interest in designing entrepreneurship curriculum to cater/accommodate the specific needs of students with disabilities.

Country	Article
	Johnmark, D. R., Wummen Soemunti, T., Laura, O., Munene, J. C., & Balunywa, W. (2016). Disabled students' entrepreneurial action: The role of religious beliefs. *Cogent Business & Management*, *3*(1), 1252549. People world over are engaged in entrepreneurship activities to promote societal and economic advancement. Along with the growing importance of entrepreneurial activity in economic growth comes concern over the religious dimension, especially as it relates to the Christian and Muslim world views. Religious beliefs are seen to be important in triggering entrepreneurial action. This study focuses on investigating the predicting role of religious beliefs on entrepreneurial action of disabled students. The study followed a descriptive survey where quantitative approach was employed. A total number of 262 questionnaires was administered to disabled students across the tertiary institutions (Universities, Polytechnics and Colleges) in Plateau State and Abuja-Nigeria. Analysis of data involved the use of descriptive statistics, correlation and Structural Equation Model. All the formulated hypotheses were also tested and the results revealed that vocation, social service and social networks significantly and positively influence entrepreneurial action. Like any other research, this study is limited in the following ways. Since only a single research methodological approach was employed, future research could undertake a mixed approach and triangulate to validate the current findings. Further, a longitudinal approach should be employed to study entrepreneurial action trends among disabled students over years. Finally, religious beliefs was studied and based on the results, there are other factors that may contribute in explaining entrepreneurial action of disabled students that were not part of this study. Reuel Johnmark, D., Munene, J. C., & Balunywa, W. (2016). Robustness of personal initiative in moderating entrepreneurial intentions and actions of disabled students. *Cogent Business & Management*, *3*(1), 1169575. Entrepreneurship is vital in the areas of innovation, job creation, nations' economic and societal advancement. In view of that, personal initiative is seen to be important in moderating the relationship between intention and entrepreneurial action. This study focuses on investigating the moderating role of personal initiative on intention and entrepreneurial action relationship of disabled students. The study followed a descriptive survey where quantitative approach was employed. A total number of 250 questionnaires were administered to disabled students across the tertiary institutions (Universities, Polytechnics and colleges) in Plateau State and Abuja-Nigeria. Analysis of data involved the use of statistical package for social sciences (SPSS version 22.0). Hypotheses were tested using structural equation model. Results revealed that pedagogy significantly and positively influences entrepreneurial actions. Also, personal initiative (proactiveness, resilience and innovation) moderates the relationship between intention and entrepreneurial actions of disabled students.
Russia	Novikova, Y. A., Milkina, E. V., Kovalenko, E. V., Konygin, R. A., Rozentsvaig, A. I., & Shabanov, D. M. (2020). International regulation of el-freelancing among people with disabilities. *Journal of Legal, Ethical and Regulatory Issues*, *23*(2), 1-8. Modern society is difficult to imagine without using the achievements of scientific and technological progress and the Internet. The Internet is becoming a part of our life every day. Not an exception and the field of entrepreneurship, especially for people with disabilities. The purpose of the article is to study the concept and prospects for the development of electronic freelancing among people with disabilities within the framework of the current economic realities of the development of society, as well as to highlight the legal status of a freelancer in accordance with modern legislation. Based on the analysis of statistical data and sociological surveys, we were able to identify the positive and negative aspects of the development of electronic freelancing among people with disabilities. In the process of the study, the authors came to the conclusion that freelancing is a promising direction in

Country	Article
	the development of small business among the disabled. In many Western countries, it has already become widespread, while in Russia it continues to evolve.
South Africa	Lorenzo, T., Van Niekerk, L., & Mdlokolo, P. (2007). Economic empowerment and black disabled entrepreneurs: Negotiating partnerships in Cape Town, South Africa. *Disability and Rehabilitation*, *29*(5), 429-436. *Purpose*. This paper presents a second part reporting on Community Disability Entrepreneurship Project (CoDEP) which was initiated in order to contribute to the development of entrepreneurial skills of disabled people living in informal settlements around Cape Town, South Africa. The aim of CoDEP has been the upliftment and economic empowerment of disabled people. This paper describes the point of departure, the theoretical framework of participatory action research (PAR), the development of research parameters, and continued focus. *Method*. A participatory action research (PAR) approach was initiated in order to monitor and inform the effective development of CoDEP. This cyclic methodology allowed all participants to engage in decision-making and development of the programme. *Results*. While negotiating partnerships with disabled entrepreneurs, the six spheres within which optimal interaction could take place emerged as: (i) the choice of occupation; (ii) changing a culture of receiving; (iii) nurturing teamwork by negotiating roles and responsibilities; (iv) a focus on ability; (v) understanding the research process; and (vi) organizational development dynamics. Committed interaction emerged as the quintessence of these partnerships. Ned, L., & Lorenzo, T. (2016). Enhancing the public sector's capacity for inclusive economic participation of disabled youth in rural communities. *African Journal of Disability*, *5*(1), 1-9. Sefotho, M. M. M. (2015). Mainstreaming disability in education beyond 2015. *South African Journal of Education*, *35*(1). Background: The capacity of service providers in the public sector to deliver inclusive services is essential to implement strategies that will allow the full participation of disabled youth in development opportunities in the rural context. Objectives: This article sets out to describe the capacity of service providers in facilitating the participation of disabled youth in economic development opportunities. Method: An instrumental, embedded single case study informed the research design. The sample consisted of five disabled youth, four family members and six service providers. Data was gathered through in depth individual interviews and focus group discussions. Data analysis was done inductively and thematically. In the discussion, the interpretation used organisational capacity elements as a framework. Results: The findings indicate a perception of disability as a multifaceted and challenging issue with different orientations to service delivery, based on the understanding of the impairment and disability. There is a strong focus on impairment and negative attitudes. Discussion: An asset-building approach could facilitate awareness of the capacities of disabled youth and thus shift negative attitudes to enabling attitudes. The vague strategies for youth and women reflect an organisational attitude that seems non-committal to its core agenda of inclusive development, which would ensure equal opportunities for participation by disabled youth. Conclusion: An appreciative process of facilitating a deeper understanding of the needs of disabled youth would assist service providers to reconceptualise disability within an expansive framework of equal opportunities and active citizenship. Van Niekerk, L., Lorenzo, T., & Mdlokolo, P. (2006). Understanding partnerships in developing disabled entrepreneurs through participatory action research. *Disability and rehabilitation*, *28*(5), 323-331. Purpose. The paper reports on a community disability entrepreneurship project in Khayelitsha and Nyanga, Cape Town, South Africa. Disabled people, Disabled people South Africa (a national organization made up by disabled people's organizations), a non-governmental organisation and

Country	Article
	occupational therapists from the University of Cape Town collaborated with the focus to achieve economic empowerment of disabled people though the establishment of micro-enterprises. Method. Participatory Action Research strategies, which informed and monitored the effective development of the community disability entrepreneurship project, were carefully integrated with the existing principles of community development. Results. The participatory action research process provided an opportunity for shared learning and development. This article reports on the challenges and strategies faced by disabled people in the quest to establish themselves as entrepreneurs. The challenges that were identified through analysis from the experiences of participants were starting with nothing, lack of capacity and complexity of establishing working relationships. The strategies used were building group identity and developing capacity together. Indicators of positive outcome that emerged from an inductive content analysis are presented and discussed.
South Korea	Hwang, S. K., & Roulstone, A. (2015). Enterprising? Disabled? The status and potential for disabled people's microenterprise in South Korea. *Disability & Society*, *30*(1), 114-129. This article explores the position, potential and scope for self-employment and microenterprise for disabled South Koreans. The chronic barriers experienced in disabled people gaining paid work suggest that self-employment and enterprise might offer a good alternative to paid work. The self-determined nature of running a microenterprise has been shown to connect with disabled people who may not conform to standardised notions of body and brain that underpin many mainstream work contexts. Despite this promise, several barriers continue to beset disabled people's access to micro-enterprise activity; barriers ranging from Confucian precepts, to employment protections that are geared largely towards paid employment and to the lack of training, finance and business support for disabled people starting up and sustaining microenterprise in Korea. The extension of legal protections, meaningful start-up subsidies, better business support and bridges between paid work and microenterprise are all seen as important policy correctives that would better support disabled people.
Taiwan	Hsieh, Y. C., Molina, V. M. J., & Weng, J. (2019). The road to entrepreneurship with impairments: A challenges-adaptive mechanisms-results model for disabled entrepreneurs. *International Small Business Journal*, *37*(8), 761-779. This article explores how different challenges potentially inspire those deemed impaired to engage with entrepreneurship and how they overcome such challenges through different adaptive mechanisms. Taking an interpretive perspective, we undertook semi-structured interviews with 13 entrepreneurs with impairments, providing an understanding of the relationship between challenges and the adaptive mechanisms that led to business and personal attainments. Based on our empirical findings, we propose a new challenges-adaptive mechanisms-results (CARE) model contributing to the literature on disabled entrepreneurship among those with impairments and also provide insights into the entrepreneurial endeavours of the disabled population.
Thailand	Aeknarajindawat, N., Karuhawanit, P., & Maneechay, S. (2019). Role of Essence, Objectives, and Content of Entrepreneurship Education Programs on Their Performance: Moderating Role of Learner Disability in Thailand. *Journal of Computational and Theoretical Nanoscience*, *16*(11), 4606-4613. The purpose of this paper was to analyse the role of Essence, objectives, and content of EEP's on their Performance with the moderating role of learner disability in Thailand. Entrepreneurship education programs are developing quickly to facilitate persons to project into an innovative business, raise the amount of "Entrepreneurs" and as well as make an influence on the intention and behaviour of entrepreneurs. The present paper applies a quantitative methodology. The researcher of this study selected the sample of the study purposely. The researcher of this paper collected data from educators and students from various universities of Thailand. All the hypotheses of this paper were accepted and has a significant impact on each other. The current research suggests policy makers to be conscious of learner's needs of entrepreneurship education programs performance. This research

Country	Article
	was limited to the Universities of Thailand. Similar researches in other states and in other universities are required to be carried out by simple random sampling technique to assess entrepreneurship education programs.
Uganda	Labie, M., Méon, P. G., Mersland, R., & Szafarz, A. (2015). Discrimination by microcredit officers: Theory and evidence on disability in Uganda. The Quarterly Review of Economics and Finance, 58, 44-55. This paper studies the relationship between a microfinance institution (MFI) and its loan officers when officers discriminate against a particular group of micro-entrepreneurs. Using survey data from Uganda, we provide evidence that loan officers are more biased than other employees against disabled micro-entrepreneurs. In line with the evidence, we build an agency model of a non-profit MFI and a biased loan officer in charge of granting loans. Since incentive schemes are costly and the MFI's budget is limited, the MFI faces a trade-off between combating discrimination and granting loans. We show that the optimal incentive premium is a non-decreasing function of the MFI's budget. Moreover, even a non-discriminatory welfare-maximizing MFI may let its loan officer discriminate, because eradicating discrimination would come at the cost of too many loans. Observing an MFI's loan allocation biased against a minority group therefore does not imply that the institution is biased against this group.
Uzbekistan	Isaev, Q. (2020). Problems of establishing small businesses with the participation of visually impaired persons. Архив научных исследований, (14). Development of a market economy requires active participation of individuals in the economy. In addition, the ability of the visually impaired to operate in small businesses, along with the adoption of social protection by the state, is important for improving the economic wellbeing of blind people. At the same time, it will have a positive impact on the country's GDP growth. The object of scientific research is the visually impaired Subject of scientific researches - Directions for the organization and financing of small business entities with disabilities in Uzbekistan Scientific novelty of the research: - Proposals for the establishment of a legal and regulatory framework that will enable blind people with disabilities to engage in entrepreneurship; - The importance of establishing training centres by state or non-government non-profit organizations for vocational training for the visually impaired is revealed; - Opportunities for establishment and financing of business incubators for small businesses operating under or acting as subcontractors in large business entities are highlighted
Zimbabwe	Ruffin, F., Chindimba, A., Zimano, F. R., & Matsaure, K. (2020). Looking under the veil: Challenges faced by people with disabilities in cross-border entrepreneurship. *African Journal of Disability*, *9*(1), 1-10. **Background:** Cross-border entrepreneurship is one source of livelihood that is transforming people's lives, especially those with limited resources and educational qualifications and those in need of supplementary earnings to complement meagre formal earnings. However, despite strides made to make this avenue worthwhile, this Zimbabwean study shows that hidden hindrances still persist from procedural and structural barriers from road entry point management systems. To people with disabilities (PWDs), the impact of these hidden barriers is severe to the extent of obstructing their optimum progression into cross-border entrepreneurship. **Objectives:** This article sought to interrogate some veiled challenges in border management systems affecting PWDs' quest to venture into cross-border entrepreneurship. This angle has, to this end, been timidly addressed as most organisations and legislation have concentrated on making things work for the majority of the populace. **Method:** Qualitative phenomenological method in which researchers' lived experiences, review of literature, ideas and opinions is complemented by secondary survey data from a road entry point management system study in the Zimbabwean setting. **Results:** Cross-border entrepreneurship has potential to transform people's lives: 1) road and border management systems' procedural and structural complications present hidden challenges impeding PWDs' entry and optimum participation in cross border entrepreneurship, 2) people with disabilities are not automatically dependents; in fact, most have dependents looking up to the, 30 social construction of

Country	Article
	disability persists and must be curbed and 4) there is a need to institute a 'stakeholders triad approach'. **Conclusion:** The existing road entry points' management systems are not informed by considerations from PWDs, hence the existence of hidden challenges. Cross-border entrepreneurship can open significant livelihood avenues to PWDs. A stakeholders 'triadapproach', proposed herein, can solve some of the policy discrepancies as it recommends utilising inputs from PWDs, research and policy-makers.

Table B11: Reviews

Papers	Review
12	Buntat, Y., Wan Roslan, W. N., Ibrahim, N., & Salleh, L. M. (2016). Challenges of entrepreneurship education for disabled people. *Advanced Science Letters*, *22*(12), 4355-4358. Entrepreneurship creates new job opportunities, thereby promoting economic growth. Entrepreneurship skills entails a multitude of attributes, some of which are ingrained in the person while others may be learnt. Probably the group of people that would befit most from entrepreneurship education would be those with disabilities as entrepreneurship promotes self-employment and economic self-sufficiency. However, it is perhaps this group of people that are facing the most challenges in entrepreneurship education. This paper reviewed the issues involving disabled people enrolled in entrepreneur education. The methodology involved reviewing twelve (12) journal articles and a background paper. The findings are essential in contributing and assisting the implementation of entrepreneurship education, particularly in relation to people with disabilities.
18	Conradie, P., De Couvreur, L., Saldien, J. and De Marez, L., 2014. Disabled Users as Lead Users in Product Innovation: A Literature Overview. *DS 81: Proceedings of NordDesign 2014, Espoo, Finland 27-29th August 2014*, pp.284-293. Lead users can be a valuable source for innovation. They are capable of detecting and experiencing needs before the general market does, and are willing to innovate because they can gain significant benefits if their needs are fulfilled. Several authors have highlighted the use of disabled persons, framed as lead users, to foster innovation in new product development. In this article, we review 18 cases where disabled users are framed as lead users, identifying common characteristics within these cases. The characteristics include the product categories where disabled lead user innovation occurs and how lead users were involved in these cases. Additionally, we look at the selection process of disabled lead users and how this relates to the classic approach of lead user innovation. Finally, we propose further opportunities for lead user innovation using disabled persons, and the challenges facing research in this domain.
6	Hutchinson, C., Lay, K., Alexander, J., & Ratcliffe, J. (2021). People with intellectual disabilities as business owners: A systematic review of peer-reviewed literature. *Journal of Applied Research in Intellectual Disabilities*, *34*(2), 459-470. Background Microenterprises are very small businesses requiring little capital and can be an employment pathway for people with intellectual disabilities. This systematic review aims to identify the facilitators, barriers and outcomes from microenterprise. Method Web of Science, Scopus, EconLit, PsycINFO and ProQuest were searched to identify peer-reviewed studies on microenterprises owned by people with intellectual disability published up to and including 1 October 2019. Results A total of 1080 papers were independently screened by two reviewers. Six papers met the inclusion criteria. Barriers included lack of access to business expertise and resources, and the tension between growing microenterprises and maintaining eligibility for welfare payments. Formal and informal supports were

	key facilitators. Outcomes experienced included additional income, skills development, increased confidence and engagement in meaningful activities. Conclusion Additional research is required to develop an evidence base which may support investment in this employment pathway, making microenterprise more accessible to people with intellectual disabilities.
14	Iacomini, S., Vascelli, L., Berardo, F., Cavallini, F., & Dipace, A. (2022). Self-employment and Entrepreneurship for Youngs and Adults with Neurodevelopmental or Psychiatric Disorders: a Systematic Review. *Journal of Clinical & Developmental Psychology*. *Background*: Self-employment and entrepreneurship are growing realities and represent a valid employment option for people with disabilities. Indeed, such strategies promote independence and reduce employment disparities, encourage innovative proposals, and create new jobs. *Methods*: This paper provides an overview of self-employment and entrepreneurship for young and adults with neurodevelopmental or psychiatric disorders to support mental health professionals, employment support service providers, and transition educators. To fulfil this intention, we conducted a systematic review using the criteria of the PRISMA statement to examine the literature's scientific contributions up to 2021. We focused on entrepreneurship motivations, entrepreneurship education, associated clinical features, and barriers experienced. We also explored the support needed to start a business and the associated employment outcomes for the target population of this review. *Results*: Self-employment and entrepreneurship can empower people with disabilities to mark the community through social and economic participation. Therefore, it is essential to develop evidence-based acceptable practices for entrepreneurship and self-employment for people with neurodevelopmental or psychiatric disorders. *Conclusions*: If entrepreneurship and self-employment can become effective employment strategies, it is crucial to consider this population's experiences in developing employment programs and policies for people with disabilities.
52	Klangboonkrong, T., & Baines, N. (2022). Disability entrepreneurship research: Critical reflection through the lens of individual-opportunity nexus. *Strategic Change*, *31*(4), 427-445. The individual-opportunity (IO) nexus has been a highly influential perspective in entrepreneurship, but its market-focused and variance-deterministic character pose serious limitations where entrepreneurship is intended as a development policy for disabled people. The extant research in disability entrepreneurship converges in the recognition of structural barriers faced by disabled entrepreneurs, but in most cases, the multilevel challenges only translate to adaptive mechanisms at an individual level. When the IO nexus is adopted as a lens, its variance-deterministic setup and market-focused outcome definitions are in favour of entrepreneurs with conventional characteristics, but less helpful for a policy purpose where substantial non-economic value could be overlooked. Two critical points for consideration in disability entrepreneurship research are the role of context in which the disabled entrepreneurs are embedded, and the influences of different levels of analysis.
20	Klingler-Vidra, R., & Liu, Y. (2020). Inclusive innovation policy as social capital accumulation strategy. International Affairs, 96(4), 1033-1050. Governments deploy policies that strive to increase the participation rates of under-represented demographic groups (according to gender, ethnicity, sexuality and disability status) in innovative activities. A growing thrust of these policies focuses on accumulating non-financial resources, particularly social capital, as the strategy for improving inclusion. Such policies include mentoring and networking schemes, role model campaigns, competitions and prizes. In contrast to the policies' growing prevalence, only a handful of studies have empirically analysed them, and fewer still offered analytical conceptualizations. In this article, we contribute by applying insights from the extant scholarship on social capital, innovation and entrepreneurship to conceptualize the policies in bonding and bridging social capital terms. We find that bonding strategies foster in-group connections, with the primary aim of encouraging under-represented groups to want to participate, thus focusing on increasing the supply of labour. Bridging strategies, in contrast, strive to link under-represented groups with finance and other centres of power, and to update societal preferences, in order to increase the demand for labour from under-represented groups. Our novel conceptualization emphasizes that

	policies should be studied according to their bonding or bridging social capital aims, as even the same policy instrument (i.e., mentorship scheme or campaign) can differ significantly in how it is employed.
42	Mota, I., Marques, C., & Sacramento, O. (2020). Handicaps and new opportunity businesses: what do we (not) know about disabled entrepreneurs?. Journal of Enterprising Communities 14(3), pp. 321-347. Purpose The process by which disabled individuals become entrepreneurs can be influenced by factors of different orders. Throughout their entrepreneurship careers and projects, disabled entrepreneurs may have to overcome multiple personal, social and political barriers. This study aims to review what we do (and do not) know about disabled entrepreneurs research to date. Design/methodology/approach The literature review focused on analysing 42 articles from two databases, namely, Web of Science and Scopus. After the articles were selected, they were grouped into thematic clusters. Findings The results were categorized into four areas, namely, entrepreneurs with disabilities, self-employment as an alternative to unemployment for people with disabilities, barriers faced by disabled entrepreneurs and the importance of education, training and/or orientation for these individuals' entrepreneurship. The research verified that, in some cases, people with disabilities resort to self-employment and become entrepreneurs to avoid unemployment. Education and training's positive role in how this process develops is clear as they empower individuals with disabilities and enable them to raise entrepreneurial attitudes. Originality/value Based on the citation profile of articles on disabled entrepreneurs, the results contribute to a better understanding of the flow and main findings of scientific research on this topic over the past 15 years. The findings also include research tendencies that reveal the field's emergent perspectives, which are of great importance to academics seeking to enhance entrepreneurial processes and policymakers interested in stimulating entrepreneurship education.
16	Norstedt, M. and Germundsson, P., (2021). Motives for entrepreneurship and establishing one's own business among people with disabilities: Findings from a scoping review, Disability & Society. As people with disabilities often face difficulties entering the labour market, entrepreneurship and self-employment are often regarded as an opportunity to gain employment and earn a living. This article presents a scoping review that aims to investigate what establishment motives previous studies have identified for self-employment and entrepreneurship among people with disabilities. Four themes emerged: economic motives; flexibility and self-determination; avoiding discrimination; and personal development and being able to contribute something. In the article we discuss the results and relate them to the general discourse on entrepreneurship, which often includes the concept of autonomy. We argue that the findings suggest implications for how to develop support and strategies for this group, to help them avoid ending up in an even more vulnerable position. In this work, the individual's own motives for establishment are of great value.
	Parker Harris, S., Caldwell, K., & Renko, M. (2014). Entrepreneurship by any other name: Self-sufficiency versus innovation. *Journal of social work in disability & rehabilitation*, *13*(4), 317-349. Entrepreneurship has been promoted as an innovative strategy to address the employment of people with disabilities. Research has predominantly focused on the self-sufficiency aspect without fully integrating entrepreneurship literature in the areas of theory, systems change, and demonstration projects. Subsequently there are gaps in services, policies, and research in this field that, in turn, have limited our understanding of the support needs and barriers or facilitators of entrepreneurs with disabilities. A thorough analysis of the literature in these areas led to the development of two core concepts that need to be addressed in integrating entrepreneurship into disability employment research and policy: clarity in operational definitions and better disability statistics and outcome measures. This article interrogates existing research and policy efforts in this regard to argue for a necessary shift in the field from focusing on entrepreneurship as self-sufficiency to understanding entrepreneurship as innovation.

	Pavey, B. (2006). Human capital, social capital, entrepreneurship and disability: An examination of some current educational trends in the UK. *Disability & Society*, *21*(3), 217-229. Influenced by European policy, human capital and social capital are currently of interest in UK education policy and practice, expressed particularly in the concepts of lifelong learning and entrepreneurship. Human capital and social capital ideas are shown to be flawed by not taking disability into account. The characteristics of entrepreneurship and entrepreneurship education are examined for relevance to young people with disabilities or learning difficulties and it is concluded that more could be done to develop opportunities for entrepreneurship. The position of people when work is not an option is considered, leading to the question of whether there is a 'disability industry', and an acknowledgement of the importance to the economy of disabled people as consumers and producers. A wider definition of entrepreneurship, which includes people with disabilities and learning difficulties, is sought and the paper concludes by discussing the wider implications for the learning community.
8	Sarker, D. (2020). Discrimination against people with disabilities in accessing microfinance. *Alter*, *14*(4), 318-328. The purpose of this paper is to explore the state of existing research on microfinance lending discrimination against people with disabilities. It argues that existing literature suggests people with disabilities face notable discrimination in accessing microfinance (Labie et al., 2015). The attitudes of employees within microfinance institutions (MFIs) are one of the principal sources of such discrimination, which has important implications for the lives of people with disabilities (Cramm & Finkenflugel, 2008; Mersland et al., 2009; Labie et al., 2015). Moreover, studies conducted by Beisland & Mersland (2012) and Nuwagaba et al. (2012) found that people with disabilities tend not to apply for microfinance due to the anticipation of such rejection. People with disabilities face both 'taste-based discrimination' (prejudice) and 'statistical discrimination' (when a decision-maker uses individuals' observable characteristics as a substitute for unobservable ones). It is reasonable to assume that reducing discrimination in the microfinance market would greatly benefit existing and prospective entrepreneurs with disabilities. However, this requires targeted interventions aimed at inducing systematic institutional reforms, changing the mindsets of employees and people with disabilities, and integrating appropriate accommodations within microfinance operations. In order to implement these changes, I conclude that microfinance regulators must work to identify areas of discrimination that are not correctly covered by existing lending practices.
	Williams, J. and Patterson, N. (2019), "New directions for entrepreneurship through a gender and disability lens", *International Journal of Entrepreneurial Behavior & Research*, Vol. 25 No. 8, pp. 1706-1726. https://doi.org/10.1108/IJEBR-12-2017-0499 Purpose – There is a dearth of studies exploring the intersection of gender and disability within entrepreneurship research. This is despite women's entrepreneurship research encouraging an expansion of the research questions asked and approaches taken. As a contribution to this debate, the purpose of this paper is to develop an understanding of gender and disability as social categorizations which can shape entrepreneurial opportunities and experiences for disabled women entrepreneurs. Design/methodology/approach – The paper offers an intersectional conceptual lens for the study of disabled women entrepreneurs to explore a concern for a particular social group – women – at a neglected point of intersection – disability – within the social setting of entrepreneurship. Guided by the research question (how can gender and feminist disability theory contribute to the development of an intersectional theoretical lens for future entrepreneurship research?), the potential for new theoretical insights to emerge in the entrepreneurship field is identified. Findings – Through a gender and disability intersectional lens for entrepreneurship research, four theoretical synergies between gender and disability research are identified: the economic rationale; flexibility, individualism and meritocracy; and social and human capital. In addition to the theoretical synergies, the paper highlights three theoretical variances: the anomalous body and bodily variation; sexuality, beauty and appearance; and multiple experiences of care as potentially generative areas for women's entrepreneurship research. The paper identifies new directions for future gender, disability and entrepreneurship research by outlining research questions for each synergy and variance which draw attention to

	disabled women entrepreneurs' experiences of choice and control within and across different spaces and processes of entrepreneuring. Originality/value – The conceptual intersectional lens offered to study disabled women's entrepreneurship highlights new directions for exploring experiences of entrepreneuring at the intersection of disability and gender. The paper brings disability into view as a social category that should be of concern to feminist entrepreneurship researchers by surfacing different dimensions of experience to those currently explored. Through the new directions outlined, future research can further disrupt the prevailing discourse of individualism and meritocracy that perpetuates success as an individual's responsibility, and instead offer the potential for richer understandings of entrepreneuring which has a gender and disability consciousness.

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APPENDIX C: Inclusive entrepreneurship survey results

Michalis Papazoglou

Survey main characteristics

The survey was conducted between 8/12/2022 (first response) and 17/04/2023 (last response), using the Qualtrics survey software tool. We received 435 complete responses from a total of 1300 responses who received the anonymous link of the survey, resulting in 865 incomplete responses (i.e., started but not completed). The large number of incomplete responses may be related to the size of the questionnaire (76 questions). Such an amount of questions could act as a disincentive to the completion of the survey, especially in the case of mental disabilities and autism.

This report is structured as follows. The next section presents the results of the questions that are related to the extent to which participants perceived themselves as entrepreneurs and innovators while being affected by disabilities. Then the results of the questions pertaining to the entrepreneurial processes and current business position of the respondents are introduced, followed by those related to experiences with existing support services. The last section presents some basic demographic characteristics.

Respondents as entrepreneurs and innovators

Table C1 presents the responses to the question "Are you disabled as defined under the Equality Act 2010?". From the 435 complete responses, 308 answered "Yes" while 119 "No". Asking for more information about their disability from those that answered "Yes" ("Can you please describe your disability?"), we received answers that show that the participants were affected by a wide spectrum of disabilities ranging from physical (e.g., sclerosis, spinal injuries, myopia, leg disabilities, deafness, arthritis) to mental ones (e.g., bipolar disorder, depression, anxiety, neurotic disabilities, autism).

Table C1. Respondents Affected by Disabilities

	Yes	**No**	**Prefer Not to Say**
Are you disabled as defined under the Equality Act 2010?	308	119	8

Table C2 shows that from the 435 respondents, 247 considered themselves entrepreneurs while 302 innovators, revealing that the professional orientation of people affected by disabilities is to a significant effect influenced by entrepreneurial and innovation culture.

Table C2. Entrepreneurs and Innovators

	Yes	**No**
Do you consider yourself to be an entrepreneur?	247	188
Do you consider yourself to be an innovator?	302	133

Entrepreneurial processes and current business position

Table C3 demonstrates that from the 435 respondents, 262 responded "Yes" to the question "Have you an established business?", while 275 responded "Yes" to the question "Are you in the process of setting up a business?". In addition, of the 262 individuals that had an established business, 161 reported that it was their first business. Most of the questions that follow concern only those 262 respondents that had an established business, since this is the group of people that are related to features, processes, and experiences of running a business while being affected by disabilities.

Moreover, Table C4 and Table C5. demonstrate that most of the 262 entrepreneurs are to an extent experienced in running a business, judging by either how long they have been trading or whether they have established a business prior to the current one. Additionally, Table 6 reports the type of businesses that are run by the 262 entrepreneurs, indicating that most cases concern sole traders or limited companies.

Table C3. Current Business Position

	Yes	**No**
Have you an established business?	262	173
Is this your first business?	161	101
Are you in the process of setting up a business?	275	160

Table C4. Trading Period

	Not trading yet	**Less than 1 year**	**1-2 years**	**2-5 years**	**over 5 years**
How long have you been trading?	16	65	64	57	60

Table C5. Prior Business Experience

	I have established 1 business before	I have established 2 or more businesses before
How many businesses have you established before?	60	41

Table C6. Type of Business

	Community interest company	Limited company	Sole trader	Other
Type of business	14	100	137	11

Figure C1 presents a map of the business locations that were reported by respondents. Although, as expected, most of the business locations are concentrated within the broader London area, as depicted by the height of conical shape (approximately 30%), the rest are relatively equally scattered across the country.

Figure C1. Map of Business Locations

Table C7 shows that the majority of 262 entrepreneurs claimed that their businesses were engaged in innovation activities since 220 answered "Yes" to the question "Is your business based on new products or services, uses new technologies or processes, or is developing a product or process?". Of these 220 participants, 96 reported that their business is based on new services and the same number of respondents stated that they use new technologies, followed by those who claimed that their business is based on "New products" (84 cases) (Table C8). Concerning the scope of innovation (Table C9), 123 participants reported that their innovation is "New to the sector/market", 58 that is "New to the firm", and 39 that is "New to the world".

The last three tables indicate that entrepreneurs affected by disabilities are to a large extent innovative, in the sense that innovation is an integral part of their venture either as an output (product/service innovation) or as a process to develop products/services (process innovation).

Table C7. Innovation Activities

	Yes	**No**
Is your business based on new products or services, uses new technologies or processes or is developing a product or process?	220	42

Table C8. Innovation Type (multiple answers)

	New products	**New services**	**Uses new technologies**	**Uses new processes**	**Is developing a product or process**
On which is based?	84	96	96	54	42

Table C9. Innovation Scope

	New to the firm?	**New to the sector/market?**	**New to the world?**
Is the innovation?	58	123	39

In Table C10, we present the choices of the respondents when asked about the nature of what they sell or propose to sell. The most frequent answer was the "Personal service", followed by "Physical item retail" and "Physical item wholesale", while the least frequent were the "Software/ web service/non-physical item bespoke" and the "Non-physical item mass produced". In addition, Table C11 reveals, as expected, that the most common sector of the participants' ventures is the "Professional services" (150 cases), which is almost double those that follow, that is the "Manufacturing" (79 cases) and "Digital" (70 cases) sectors.

Table C10. Nature of products/services (multiple answers)

	What is the nature of what you sell/propose to sell?
Personal service	89
Physical item retail	66
Physical item wholesale	62
Software/web service	52
Consultancy	41
Brokering service	37
Other	35
Hospitality products	26
Software/ web service/non-physical item bespoke	25
Non-physical item mass produced	12

Table C11. General Sectors (multiple answers)

	Digital	Professional services	Manufacturing	Other
In which sectors do you mainly work in?	70	150	79	33

Table C12 presents how many of the respondents had personnel within their business, indicating that most of the entrepreneurs (231) receive some kind of support either in the form of employees, associates, volunteers, or support workers. Additionally, Table C13 shows that the most frequent range of the number of personnel is between two and five in all categories (i.e., full-time and part-time employees, associates, volunteers, and support workers), while the most common range of the number of weekly hours worked is 21-40 for all the categories, except for the volunteers which is 0-20 (Table C14).

Moreover, when asked "How many hours per week do you work", respondents answered that they work 33.8 on average, while most of them (191 cases) reported that they didn't have any restriction to the number of hours they can work (Table C15). For those who answered "Yes" to this question, most of the restrictions were usually due to health issues, alternative employment, or to other caring responsibilities and commitments.

Table C12. Personnel

	Yes	No
We are interested in how your business operates on a day-to-day basis. Do you have employees / associates / volunteers / support workers?	231	31

Table C13. Number of Personnel per Category

	0	1	2-5	6-10	11+
How many full-time employees do you have?	27	28	86	63	27
How many part-time employees do you have?	46	52	88	34	11
How many associates do you have?	33	31	74	54	39
How many volunteers do you have?	69	43	71	34	11
How many support workers do you have?	52	38	74	39	28

Table C14. Hours of Work per Category

	0-20	21-40	41-100	101-300	301+
How many hours per week do your employees work in total?	53	129	50	8	9
How many hours per week do your associates work in total?	59	124	39	5	10
How many hours per week do your volunteers work in total?	105	66	15	5	10
How many hours per week do your support workers work in total?	85	90	28	5	10

Table C15. Time Restrictions

	Yes	No
Are you restricted to the number of hours you can work or earn?	71	191

Furthermore, asking whether they had any co-founders, associates, or partners with a significant involvement at start-up, 162 out of 262 responded positively (Table C16), stating that financial advice, money, and previous workplace were the most important help that they provided (Table C17).

Table C16. Involved Partners

	Yes	No
Did you have any co-founders / associates / partners with a significant involvement at start-up?	162	100

Table C17. Partners' Provision (multiple answers)

	What did they provide?
Financial advice	77
Money	68
Previous workplace	49
Managed services such as science park	44
Previous colleagues	36
Mentoring	31
Other	16

As to the question of whether they work from home, office, or somewhere else, respondents answered that mainly work from office, closely followed by work from home (Table C18). Moreover, 85 out of 262 reported that they trade outside the UK (Table C19), specifying that, for most of the cases, they trade in Europe, USA, Asia, or Australia. In addition, the most frequent answer to the question concerning the most recent annual turnover was the £20,001 -£50,000 range followed by the £50,001-£100,000 (Table C20).

Table C18. Place of Work

	Home	Office	Other
Do you mainly work from:	117	129	16

Table C19. Innovation Scope

	Yes	No
Do you trade outside the UK?	85	177

Table C20. Innovation Scope

	£0-£10,000	£10,001-£20,000	£20,001 - £50,000	£50,001-£100,000	£100,000+
What is your most recent annual turnover?	41	48	88	49	36

Furthermore, the most common response to the question about how the Covid19 pandemic has affected starting or growing their business was "Turnover reduced" (90 times), followed by the answers "Diversified" (81 times) and "Employees reduced" (56 times) (Table 21). However, interesting is the fourth most frequent answer, that is "Turnover growth" (56 times), which denotes that for a relatively important number of ventures the Covid19

pandemic proved to be a business opportunity for growth than a threat. Finally, when asked about what are their business targets, respondents mainly referred to growing of their business and money as their basic targets (72 cases), followed by solidarity motives (or related to helping people) (14 cases) and artistic ones (4 cases).

Table C21. Covid19 Effect (multiple answers)

	How has the Covid19 pandemic affected starting or growing your business?
Turnover reduced	90
Diversified	81
Employees reduced	56
Turnover growth	54
Easier to cope with my disability	49
Not at all - still trading	44
I had to rethink the model	32
Employees increased	29
Stopped trading	26
Easier to get hold of key people	26
People had more time for me	20
Other	14

Experiences with existing support services

Table C22 presents the most frequent answers to the question about the reasons for becoming an entrepreneur by ranking up to 3 in order of importance with 1, 2, 3. By far the most common answer was "A real and sustainable alternative to life on benefits" (90 times ranked first), followed by "Allows me to manage my disability related symptoms and remain in work" (38 times), and "Being my own boss" (37). Interesting is the answer that ranked fourth, that is "Could not find suitable employment", revealing that finding suitable employment is not an easy task for individuals affected by disabilities.

Table C22 Reasons for becoming an entrepreneur

Why did you become an entrepreneur? (Rank up to 3 in order of importance with 1, 2, 3)			
	1	**2**	**3**
A real and sustainable alternative to life on benefits	90	14	13
Allows me to manage my disability related symptoms and remain in work	38	48	70
Being my own boss	37	42	21
Could not find suitable employment	34	59	15
To make a difference in the world or my community	28	47	24
To pursue a new opportunity in a market or create a new market	13	25	47
To build wealth or high income	13	15	36
Other	6	2	5
Friends' or others' suggestions	3	5	22

Furthermore, Table C23 shows the results of the question concerning the most significant challenges faced when starting as an entrepreneur, answered in the same way as the question in Table 4.1. In this case, by far the most frequent response was "Access to finance/Accessing finance", which was ranked first 100 times, double the second response, that is "Confidence". "Coping with the complexity of running a business whilst navigating health symptoms" was the third most common answer, indicating that the anxiety of people affected by disabilities to cope with everyday difficulties and challenges is still strong.

Table C23. Challenges to success

When starting as an entrepreneur what did you perceive as the most significant challenges to your success. (Rank up to 3 in order of importance with 1, 2, 3)			
	1	**2**	**3**
Access to finance/Accessing finance	100	17	29
Confidence	50	67	21
Coping with the complexity of running a business whilst navigating health symptoms	28	38	22
Understanding business regulations	19	12	48
Lack of business support	16	24	22
Factors associated with disability	15	27	30
Lack of appropriate practical support	15	15	16
Lack of entrepreneurial/business experiences	9	19	29
Being taken seriously	5	29	17
Other	4	3	6
Lack of management skills	1	4	10

In Table C24, we present the responses about how did they access the finance required to set up their business. Most of the respondents were self-financed (128 cases) or they had received financial support from friends and family (112) or partners/associates/co-founders (88). Additionally, this table reveals that it was relatively difficult to receive financial support from government grants (only 19 cases).

Apart from the financial support, participants were asked about other types of support that they received in their initial entrepreneurial steps (Table C25). The most frequent types of support were related to marketing, financial management, intellectual property, regulations, and managing health issues and wellbeing at work. These kinds of support were coming mostly from family and friends.

Table C24. Initial Finance (multiple answers)

	How did you access the finance required to set up your business?
Self-financed	128
Friends and family	112
Partners/associates/co-founders	88
Bank and other formal lenders	40
Angel Cash	27
None required	25
Charitable funding	21
Government grants (e.g., Innovate UK, UnLtd).	19
Other	18
Crowdfunding	11

Table C25. Other Types of Support (multiple answers)

	What other support did you require at this time?
Marketing	120
Financial management	103
Intellectual property	66
Legal/regulatory/compliance issues	65
Managing disability, health and wellbeing in work	57
Human Resources	49
Compliance	45
Managing people	43
Innovation	38
None	27
Acquiring premises	24
Other	11

Asking specifically about the sources of support in the form of advice and guidance (i.e. non-financial support) that they used to set up their business, respondents reported that "Partners/associates/co-founders" and "Friends with experience" were their main sources, followed by "Investors/ lenders, bank, start-up programme" (Table C26). Formal support networks were used only in 36 cases out of 262, while the formal support networks that the respondents referred to were the following: Innovate UK Edge, New Anglia LEP, Innovate UK Newables, Inclusive Entrepreneur Network, 2-Gether International, Inclusive Entrepreneur, Patchwork Hub, Entrepreneurs with Disabilities Programme, Chamber of Commerce, Women in Business NI, Autistic Entrepreneurs Inclusive Entrepreneurs, Hatch Enterprise, The Business Woman's Network, Business Link, UKRI, KTN, Film & TV Charity Institute of Directors, and STANTA - University of Hertfordshire.

Table C26. Sources of Advice and Guidance Support (multiple answers)

	What were the main sources of support in the form of advice and guidance (i.e., non-financial support) that you used to set up your business?
Partners/associates/co-founders	145
Friends with experience	97
Investors/ lenders, bank, start-up programme	77
Mentor (Please specify how the mentor was found)	48
Business advisor	45
Formal support networks (Please specify their names)	36
Other	24

Table C27 shows how the participants responded to the question of whether they had considered applying for Innovate UK funding. Most of them expressed their intention to do so, although they haven't done it yet (122 cases). The 21 cases that had already accessed or applied for Innovate UK funding specified that they had been involved in one of the following Innovation Competitions: Young Innovators Award 22/23, FastStart, TRIG/Catapult, SmartGrant, UKRI Innovation-Inclusivity Grant, APC/DfT Transport OpenCall, Inclusive Innovation Awards 2022, GCRF Agrifood Africa Catalyst Round 3, Fast Start, Inclusion Award, and Transformative Technology.

Moreover, to the question of whether they have received support for innovation from a funding agency other than Innovate UK (Table C28), 23 respondents replied positively, referring to one of the following organisations: ERDF/Staffordshire University, EU/Advantage-WestMidlands, Institution for Persons with Disabilities, European Space Agency, National Lottery Community Fund, Interface, and INNOFUNDTEST.

Table C27. Innovate UK Applications

	I have already accessed or applied for Innovate UK funding	I haven't accessed but I intend to	I have no intention to access Innovate UK funding
Have you considered applying for Innovate UK funding?	21	122	29

Table C28. Support for Innovation from Agency other than Innovate UK

	Yes	No
Have you received support for Innovation from a funding agency other than Innovate UK?	23	135

Table C29 indicates that 139 out of 262 stated that they belong to a Business Network. The business networks that were named are the following: Young Innovators Cohort 22/23, DBN and North East Chamber of Commerce, Zinc Venture Builder, Innovate UK Edge, Sse, FSB CBI Entrepreneurs Forum, Lunchclub, Mint Business Club, GVS, C3SC, Computer Support Specialist, Social Enterprise Stakeholder Group, Manufacturing UK, UKFT, CeeD Scotland, Women's Enterprise Scotland, Key Person of Influence, Wiltshire Music Connect, European String Teachers' Association, Charity Grant, Startup Huddle, The Business Woman's Network, Diverse Business Network Ltd, Savvitas, Tech London Advocates, British Computing Society, Federation of Small Businesses, IPSE, RH Networking, IOD, Good Business Club, Happy Startup School, Hatch Enterprise, Meaningful Business, Women in Business NI, FSB, The Inclusive Entrepreneur Network, Royal Society of Arts, North Wales Social, CIMR Birkbeck, Drive the Network, Sirius, Chamber of Commerce, Nottingham University, Ingenuity Lab, Buy Women Built, Women's Chapter and EY Winning Women, National Enterprise Network, Universal Inclusion, Patchwork Hub, Social Enterprise UK, Down Business Network, Various Chamber Bighouse Ingenuity Northern Lass Lounge, Public Digital and Equal Experts, Bournemouth Chamber, and Social Business Wales.

Of the 139 entrepreneurs that were members of a business network, 117 reported that they found the network's support and advice useful (Table C30), specifying that this support took one of the following forms: shared experiences and advice, networking, shared information, guidance, hard-working culture, financial support, encouragement, practical business support, relevance, webinars, marketing and business support, providing of confidence, and providing of guidance for the disabilities.

On the contrary, when asked about whether there was anything missing from the support and advice that could have been beneficial if provided, respondents reported a lack of various issues such as professional guidance, diligence in learning and progress for their own entrepreneurial goals, health and wellbeing advice, more knowledge around working with

disabled entrepreneurs, managing time and access to funding, following business as usual modelling without agility, legal advice, more 1 on 1 support, accessing funding, practical ideas and considerations, more specialisms, Deeper Marketing and PR support, and emotional support.

Table C29. Business Network Membership

	Yes	No
Do you belong to a business network?	139	123

Table C30. Business Network Usefulness

	Yes	No
Was the support/advice useful?	117	22

Table C31 shows the positive and negative answers to the question of whether their businesses have a social impact. 187 out of 262 respondents answered positively, reporting that their main social impacts concerned an increase in skills and knowledge (108 cases), development of innovative products and services (92 cases), positive effect on public wellbeing and mental health (90 cases), increase in equality, equity, and equal opportunities (87 cases), and decrease in unemployment (90 cases) (Table C32).

Table C31. Social Impact

	Yes	No
Does your business have a social impact?	187	75

Table C32. Social Impact Types (multiple answers)

	Business social impact
Increases skills and knowledge	108
Developing innovative products and services	92
Has a positive effect on public wellbeing and mental health	90
Increases equality, equity, and equal opportunities	87
Decreases unemployment	80

Table C33 presents participants' responses to a series of questions related to the Access to Work Award. 197 out of 262 had heard of the Access to Work Award while 113 of them had applied for it. Requesting extra information from those that had applied in the past, for 74 participants out of 113 the application process was easy and straightforward while for 39 respondents it wasn't an easy process, reporting various negative aspects such as delays,

poorly designed process for start-up, too many questions forms, feeling like having to prove existing disabilities, process poorly documented, inconsistent advice, difficult communication with admin, and absence of flexibility and agility.

To the question of whether the Access to Work Award was helpful in setting up their business overall, 92 participants out of 113 responded positively, emphasizing the importance of providing support workers, equipment, and kits. For those that answered negatively to this question (21 cases), a complaint about not being helpful in the set-up phase was recorded. Moreover, for 72 respondents the Access to Work Award caused them to think more carefully about their objectives and how to go about their business, specifying that it helped them with issues such as strategy coaching, focusing on what missing from the business, expansion of business possibilities and partnerships, and new ideas.

Additionally, for 85 participants (out of 113) the Access to Work Award helped them to navigate their symptoms as an entrepreneur, mainly by providing support workers and coaching. Furthermore, 70 respondents reported that they had problems in managing their award, problems which were mostly related to the communication with the personnel, delays and inconsistency in payments, delays in the renewal process, and the necessity to print receipts and invoices. On the contrary, those that responded negatively (i.e., no problems in managing their award) emphasized the exceptional support and the fact that everybody in the agency was motivated. Finally, to the question of whether the award provided everything they required, 85 respondents answered "Yes", stressing the importance of the special equipment, support workers, coaching, wheelchair funding, and mentoring while from those that answered negatively, an appeal for an increase of the support was made.

Table C33. Access to Work Award

	Yes	**No**
Have you heard of the Access to Work Award?	197	65
Have you applied for an Access to Work Award?	113	84
Was it easy to make an application?	74	39
Was it helpful in setting up your business overall?	92	21
Did it cause you to think more carefully about your objectives and how to go about your business?	72	41
Did it help you to navigate your symptoms as an entrepreneur?	85	28
Did you have problems in managing your award?	70	43
Did the award provide everything you required?	85	28

Demographics

The last section presents some basic demographic information. In particular, Table 34 shows that the most frequent age group was "25-34" (115 cases), followed by "35-49", revealing that younger entrepreneurs affected by disabilities are more active in entrepreneurial activities. Moreover, males were slightly more than females (Table C35), while the most common ethnicity of the respondents was "English, Welsh, Scottish, Northern Irish or British" (145 out of 262 in Table C36) and the most frequent first language was English (210 out of 262 in Table C37).

Table C34. Age

	What is your age?
under 24	13
25-34	115
35-49	91
50-64	33
65+	7
Prefer Not to Say	3

Table C35. Gender

	How do you define your gender?
Male	130
Female	111
Non-binary / third gender	13
Prefer not to say	8

Table C36. Ethnicity

	What is your ethnicity?
English, Welsh, Scottish, Northern Irish or British	145
Irish	18
Arab	18
Any other White background	11
Caribbean	11
African	9
Any other ethnic group	9
Any other Black, African or Caribbean background	7
White and Asian	5
Any other Mixed or Multiple ethnic background	5
Pakistani	5

	What is your ethnicity?
White and Black African	4
Indian	4
Bangladeshi	4
White and Black Caribbean	3
Gypsy or Irish Traveller	2
Chinese	2

Table C37. First Language

	What is your first language?
English	210
Gaelic	13
Welsh	12
British Sign Language	12
Other	8
Irish	7

Moreover, 92 respondents reported that they had caring responsibilities which were mostly related to children or parents (often with disabilities), and other family needs, (Table C38). Additionally, the majority of the respondents expressed their willingness to be involved further in research issues related to Inclusive Entrepreneurship (Table C39) by agreeing to take part either in a focus group (166 cases) or in further discussions about this topic (190 cases).

Table C38. Caring Responsibilities

	Yes	No
Do you have any caring responsibilities?	92	170

Table C39. Further involvement

	Yes	No
Would like to take part in a focus group?	166	96
Would you like to take part in any further discussions about this study?	190	72

The last question that the participants responded to was to name the Network that asked them to complete the questionnaire. The most common answers to this question were the following: Northumbria University, Patchwork Hub, Innovate UK, Pro Star Garden Management, Inclusive Entrepreneur Network, Disability Arts Cymru, Wrexham Enterprise

Hub, Universal Inclusion, Birkbeck College, Disability Wales, APPGIE, Women in Academia Support Network, Oldham Startup Huddle, Diverse Business Network Ltd, GEN UK, CIMR Birkbeck University, National Enterprise Network, The Ingenuity Lab - Haydn Green Institute for Innovation and Entrepreneurship - University of Nottingham, and Disabled Entrepreneurs UK.

APPENDIX D: Labour Workforce Survey: disabled entrepreneurs in the UK

Rebecca Florisson

Introduction

This analysis uses the Labour Force Survey microdata, Q4 2022 (October-December)[15].

The sample is restricted to include only those respondents aged between 16 and 65 years old, unless otherwise indicated.

Main condition

Self-employed disabled workers are significantly more likely than disabled employees to:

- Experience disabilities with back or neck (10.1% compared with 7.3%)
- Experience heart, blood pressure, asthma, bronchitis (13% compared with 9.6%)

Self-employed disabled workers are significantly less likely than employees to experience depression, bad nerves or anxiety (10.3% compared with 16.3%).

Main condition by gender

Female self-employed disabled entrepreneurs are significantly less likely than their male counterparts to:

- Experience problems or disabilities with legs or feet (6.8% compared with 9.1%)
- Experience heart issues, blood pressure, asthma, bronchitis (6.8% compared with 16.9%)
- Experience progressive illnesses such as cancer, multiple sclerosis, HIV, etc. (6.2% compared with 3.4%)
- Experience 'other health problems or disabilities', with 22.7% of female disabled entrepreneurs giving this as their main condition, compared with 12.7% of male disabled entrepreneurs.

Female self-employed disabled entrepreneurs are more than twice as likely as their male counterparts to experience depression, bad nerves or anxiety (16.2% compared with 6.5%).

Ethnic minority background

Disabled entrepreneurs from ethnic minority backgrounds are more than three times more likely than white disabled entrepreneurs to indicate that diabetes is their main health condition (15.7% compared with 5%).

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[15] Office for National Statistics. (2023). Quarterly Labour Force Survey, October - December, 2022. [data collection]. UK Data Service. SN: 9052, DOI: DOI: http://doi.org/10.5255/UKDA-SN-9052-1

Household composition

Parents of young children aged up to 4 are more likely than other disabled entrepreneurs to:

- Experience depression, bad nerves and anxiety (23.2% compared with 9.2%). This also holds for parents of slightly older children (aged up to 9), among whom 18.9% indicates nerves, compared with 8.5% of other disabled entrepreneurs.
- Experience 'other health problems', 28.1% compared with 16.7%. This difference is small and non-significant for parents to older children.

Applying Equality Act (2010) definition of disabled people[16]

Disabled people are slightly more likely to be self-employed than non-disabled people (12.5% compared with 11.9%).

Women who are disabled are more likely to be entrepreneurs than their male counterparts (22.8% of disabled women are working as self-employed, compared with 18.8% of men).

The likelihood of being in self-employment goes up with age for disabled and non-disabled workers.

The East Midlands (24.6%) and the North East (23.8%) are the English regions where the proportion of disabled self-employed workers is highest. Of the nations, the proportion of self-employed disabled workers is highest in Wales (26.4%).

The proportion of disabled BAME people who are in self-employment is smaller than for white Brits (18.8% compared with 20.6%).

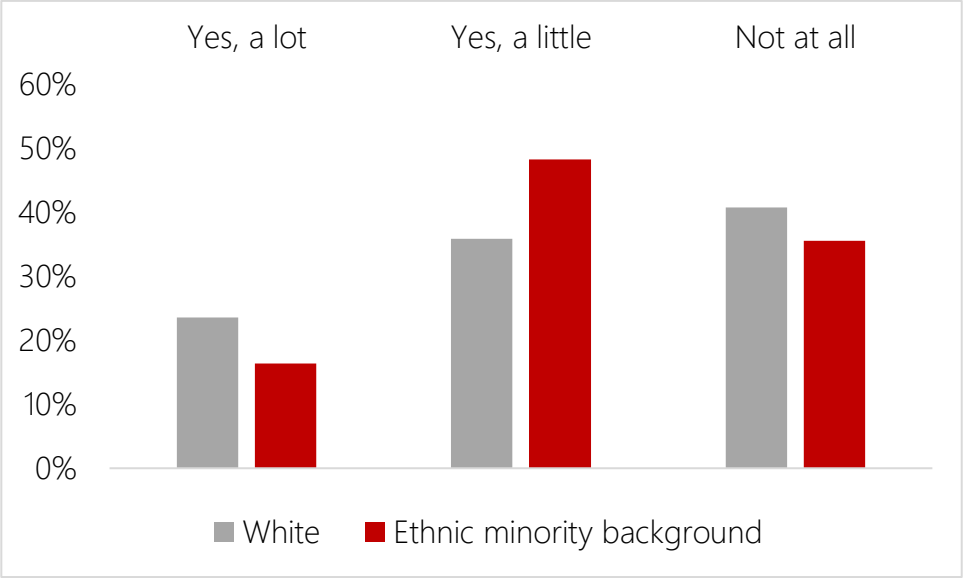
Similar to non-disabled self-employed people, 62% of disabled entrepreneurs have been self-employed for over 5 years. However, a slightly bigger proportion of disabled entrepreneurs has been self-employed for fewer than 2 years (21%) compared with 16% of non-disabled entrepreneurs.

Disability limits activity

We see a slight difference in the extent to which disabled people are affected by their condition, by their employment status. Self-employed disabled people are more likely than disabled employees to indicate that their health limits their activity 'a lot'.

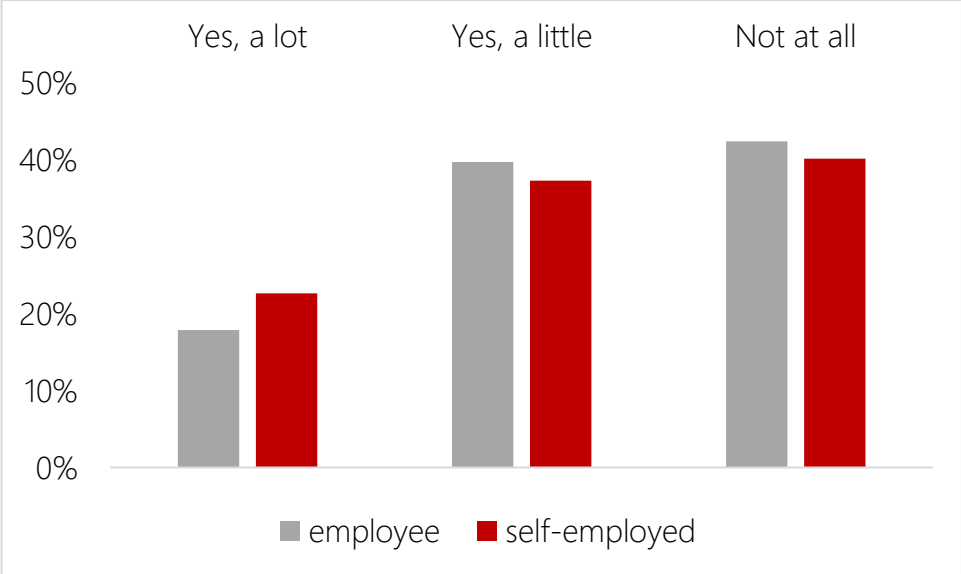
[16] https://www.gov.uk/definition-of-disability-under-equality-act-2010

Figure D1: Extent to which disability/condition limits day to day activity



Source: Calculations using the Labour Force Survey microdata, Q4, 2022.

Figure D2: Self-employed by extent to which disability impacts day to day activity, by ethnicity



Source: Calculations using the Labour Force Survey microdata, October-December 2022.

Self-employed disabled people with young children (aged under 4) or children of primary school age (under 9) are less likely than their childless counterparts to indicate their health limits their daily activity a lot (14.8% for disabled self-employed parents of children aged under 4 compared with 23.2% of childless self-employed disabled workers). As the sample sizes here are low, care needs to be taken in interpreting these data.

Relatively new self-employed workers are more likely to indicate their health affects them a lot, compared with those who have been self-employed for a longer period of time. This could be related to the pattern we noticed with age, where older self-employed disabled workers are more likely to indicate that they are affected a lot.

Understanding Society

We can see that some self-employed non-disabled workers are making more money on average than employees. However, this is driven by some individuals who have very high earnings.

When we compare pay across employment status for disabled workers, we find that self-employed disabled workers tend to make less money than their employed counterparts.

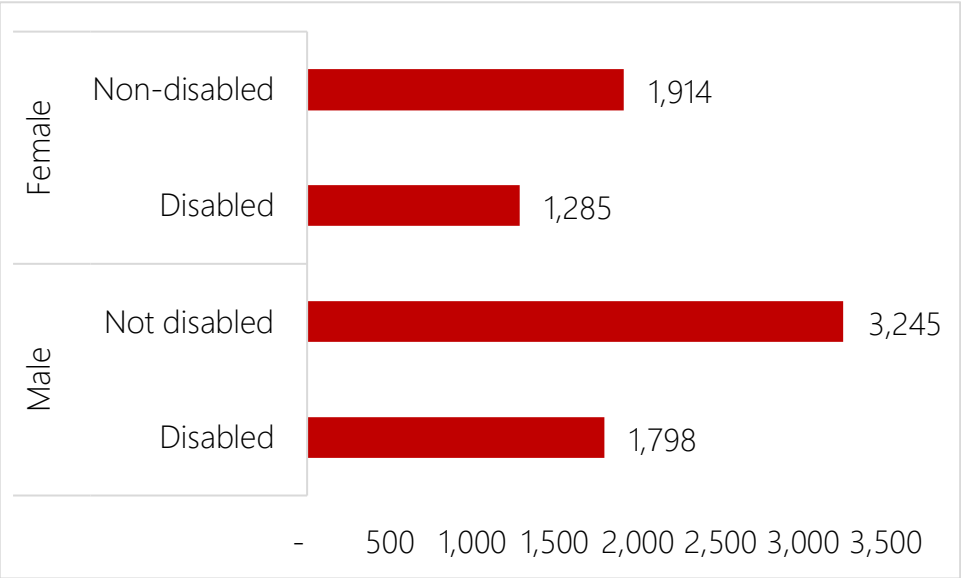
Figure D3: Earnings for disabled and non-disabled people by employment status

Source: Calculations using the ESRC-funded Understanding Society study, wave k, 11[17].

Concerning, we observe a persistent pay gap between disabled and non-disabled workers, as well as a gender pay gap.

[17] University of Essex, Institute for Social and Economic Research. (2022). *Understanding Society: Waves 1-12, 2009-2021 and Harmonised BHPS: Waves 1-18, 1991-2009*. [data collection]. *17th Edition*. UK Data Service. SN: 6614, DOI: http://doi.org/10.5255/UKDA-SN-6614-18

Figure D4: Earnings differential between disabled and non-disabled workers, by gender



Source: Calculations using the ESRC-funded Understanding Society study, wave k, 11.