Innovation and Inclusion: The role of persons with disabilities in sustainable development in India

Dilpreet Singh Guleria¹,
GD Goenka University, Gurgaon²

¹Preeti Malhotra,
preeti.malhotra1@gdgu.org

²Dilpreet Singh Guleria,
email: pguleria@yahoo.com

Abstract
PWDs in India is more than merely a group of oppressed people who are also essential assets for innovation and sustainability. This paper examines how business and society can benefit from PwD perspectives, accessibility knowledge, flexibility, and market opportunities. Another issue that is discussed in this paper involves the challenges and barriers to participation in innovation for people with disabilities like attitudinal barriers, accessibility, and skills development. In conclusion, the paper offers some perspectives and suggestions that might be useful for firms and policymakers wishing to exploit this under-tapped resource. The Sustainable Development Goals (SDGs) make individuals with disabilities (PwD) both beneficiaries and agents of change. Besides, PwD have the potential to drive innovations toward an inclusion-oriented and green society.

Introduction
The greatest challenges are facing India with the fastest growing economy and the biggest potentials for sustainability. These include involving PwD people which constitute 2.2% of India's population in business practices and innovation processes (Census of India, 2011)¹. This denies the PwD in India, who are mostly poor, unemployed and socially excluded, from realizing their full potential towards participation in economic and social developments. These include the prevalence, types, and causes of disability, the legal and policy framework, the challenges and barriers faced by PwD, and the opportunities and potential of PwD. This paper seeks to shed light on how PwDs can be a resource for innovation and sustainable development in India. For this to be successful, it would be essential to embrace a disability inclusive development approach that acknowledges the rights, dignity, and diversity of PwD and includes them in all aspects of development planning and implementation.

Innovation-driven Sustainable Development
Sustainable development goes beyond consideration of social, economic and other factors. This is because innovation entails producing new technologies, solutions, business approaches, and social undertakings that serve a wider population. PwD may have the ability to play an important part of innovations; since they carry unique experience, talent and requirements that will enriches the ideation and design processes leading to development of fresh opportunity markets.

Innovation is not just about developing new products and services but also finding new ways of doing things that are more productive, efficient, effective and fairer. Innovation can contribute to the three dimensions of sustainable development: sustainable, by minimizing the adverse effects of humans on the environment, natural resources, and ecosystems; contributing to economic development and creating job opportunities for every level of society; and socially, by improving overall welfare, inclusive and empowering the people especially the vulnerable. This means that PwD can be involved in innovations in various sectors of education, health, agriculture, energy etc. where they would bring in their own perspectives, experiences, and necessities. Innovation can also go a long way in helping PwD to address some of the barriers and challenges in realizing their rights and opportunities. Innovation is key to building a fairer world for PwD, as the UN Secretary-General stated on the occasion of the International Day of Persons with Disabilities in 2020 (Innovation key to a fairer world for persons with disabilities: UN chief, 2020)².

Innovation from the perspective of persons with disabilities.

PWD can contribute to innovation in various ways, such as:

Diverse Perspectives: Firstly, because of their different experiences, the views of PwD are important for the discourse. This enables them to develop universal solutions that involve all the social group of people. Disability innovation is a process that involves co-creation, collaboration, and empowerment of PwD to generate solutions that are inclusive, accessible, and sustainable [24].

http://jier.org
Accessibility Expertise: PwDs know what is needed for accessibility hence, companies can make goods, offer services or construct buildings that all people can utilize. PwD are able to plan, design and evaluate products and services in a way that is accessible to different customers. The Business Case for Hiring Persons with Disabilities provides some reasonings and evidence regarding why hiring PwD is good business sense involving diversity, productivity, customer loyalty, and social responsibility [24].

Adaptability: Due to this, they become compelled to exhibit their flexibility and problem solving skills in innovative situations. They help their businesses to survive in the most difficult operating situation, namely the complex and dynamic environment [24].

Market Opportunities: Another significant group of consumers that also require special services is PwD. Similarly, these consumers provide great opportunity for businesses targeting them. It is on this premise that the companies achieve economic growth and positive return to society by meeting the needs of this ignored category [25].

Challenges and Barriers
There are many challenges and barriers that hinder PwD from participating in innovation, such as:

External Factors: External factors that hinder access and participation of PwD in innovation include attitudinal barrier, barrier due to unavailability or none-accessible facilities, and lack of skills development. There are attitudinal barriers in the society towards PwD, including the negative stereotypes, stigma and discrimination that PwD experience, which affects self-esteem, confidence, and motivation among PwD. Accessibility problems comprise the limitations in getting to different products, services and equipment as a consequence of physical, technological, as well as information reasons. Skill development refers to the gaps or the deficiencies in the educational, training and or the mentoring opportunities that PwD have to acquire or enhance their innovation capabilities. These external factors create a vicious cycle of exclusion and marginalization for PwD, which hampers their potential and contribution to innovation [12].

Internal Factors: Similarly, PwD are also endowed with some of the internal capabilities which help them overcome the external challenges such as self-confidence, resilience, creativity, and motivation. Self-confidence is defined as belief or trust in own capacity of doing well. Motivation is simply the urge or desire to do achieve something we want or have set as a goal. Resilience encompasses the ability or capacity to adjust to or bounce back from adversity. Creativeness is defined as having the gift of conceiving fresh or ingenious ideas/answers. These internal factors create a virtuous cycle of empowerment and inclusion for PwD, which enhances their performance and participation in innovation [17].

Case Studies
Several Indian tech companies and social enterprises have adopted inclusive design and offer jobs to people with disabilities (PwD). For example:

Microsoft India: Microsoft India developed Project ReWeave with the intention of helping disabled weavers who face job loses due to automation [6].

IBM India: IBM India has created a product called Spoken Web that allows individuals with difficulties in seeing or reading to access information and services using their voices through mobile phones [3].

Enable India: Enable India is a social organization which offers PwD seekers training, placement, mentoring, and advocacy services. It has partnered with more than 700 firms from various industries and put more than 20,000 PwD in decent work [4].

Mirakle Couriers: Mirakle Couriers is a courier company whose delivery agents are deaf people and sign language is the main way of communication. It has numerous accolades for its revolutionary business model and positive influence [5].

Case studies on the Inclusion and Innovation with PwD as an illustration.

Vineet Saraiwala: There is an Indian blind who wrote Atypical Advantage, which is a platform for talent people with disabilities in India. He also holds a degree from IIM Banglore; he is a marathoner as well as a trekker. Its inspiring nature makes his story get featured in different media houses and YouTube videos. PwD will see this as it shows to the world the distinct views by PwD, accessibility knowledge, flexibility and business possibilities to organization and the society. Additionally, he has overcome the challenges prevailing in an Indian setting, such as attitude, skills development, among others. In this regard, he has also made suggestions that enterprises and policymakers can take if interested in exploring the huge market from this group of individuals[9].
Sminu Jindal: Sminu Jindal who is on a wheelchair is the Managing Director of Jindal SAW Ltd. She is among the few female business titans who have been championing for persons with disabilities’ inclusion in corporate matters. She has contributed to creating inclusive and environmentally sound workplaces[10].

Sachin Dev Duggal: Engineered, this is AI’s platform to build unique bespoke software solution as an entrepreneur who has poor sight. He managed $450 million for his company and achieved unicorn status[11].

Pranay Jain and Anshul Singhal: They are two men who developed a thing known as EyeDentify that helps blind people distinguish object shaped, faces, color, and text using their mouth. They won at the Microsoft Imagine Cup India 2017 before proceeding to India. Moreover, they have received awards for their innovative product and being a social good agent[12].

Recommendations
To create a conducive environment for PwD to participate in innovation, businesses and policymakers should consider the following suggestions:

Awareness and Sensitization: Therefore, this recommendation is derived from the fact that negative stereotypes and discrimination against PwD affects their self-esteem as well as employment opportunities, thus societal awareness programs should showcase PwD abilities and skills in order to change social attitudes [18][19].

Accessibility Standards: The suggestion is driven by the fact that PwD come across poor quality and non-suitable physical and virtual infrastructures. Therefore, public spaces, transit systems and digital platforms should observe accessibility standards in order to be user friendly [20].

Skill Development: Therefore, the fact that PwD should be taught specialization packages with both necessary professional and soft skills that can make them effective in any employment condition forms the basis of this recommendation [21].

Policy Support: This is suggested because some public policies might provide tax breaks, supports, and subsides to employers or organizations who want hire or buy from PWD towards their employment and procurement [22].

Innovation Platforms: The suggestion is made on the ground that collaborative innovation, knowledge exchange, new product development for PwD are stimulated through platform–based linkages with other stakeholders [10][23].

Conclusion
PwD is not merely a marginalized group, but rather a large pool of untapped ideas that can help to shape a sustainable future for India. They could provide divergent opinions, knowledge about accessibility, flexibility, and possibilities to the market for businesses and societies. But at the same time they have so much impediments that prevent them from reaching their optimum. Thus, this paper has offered some views and recommendations to enterprises and policy makers who want to take advantage of this untapped mental reserve. This will benefit India to leverage on its dividend and secure its long-term prospects.

References
6. Microsoft India. Project ReWeave. Microsoft Philanthropies leverages technology to empower handloom weavers in Telangana - Microsoft Stories India.
9. MIT News: A measurable improvement in STEM access for the blind. Two MIT graduate students have developed a device that provides better access to STEM materials for the blind and low-vision community. Read more at: https://news.mit.edu/2017/measurable-improvement-in-stem-access-for-the-blind-0322
13. Meet Vineet Saraiwala, the Blind Man Who Built India’s First Platform for PwD Talent. Read more at: https://yourstory.com/socialstory/2020/12/differently-abled-india-first-hiring-platform
14. We are capable of achieving whatever we want in life: Sminu Jindal of Jindal SAW. Read more at: https://yourstory.com/herstory/2019/09/sminu-jindal-saw-svyam-accessibility
16. A measurable improvement in STEM access for the blind. Read more at: https://news.mit.edu/2017/measurable-improvement-in-stem-access-for-the-blind-0322
18. Disability Awareness Program in Schools for Sensitization. Read more at: Disability Awareness Program in Schools for Sensitization | The Association of People with Disability (apd-india.org)
19. 30 Inspiring Activities To Promote Disability Awareness. Read more at: 30 Inspiring Activities To Promote Disability Awareness - Teaching Expertise
20. Accessible India Campaign. Read more at: Accessible India Campaign | Department of Empowerment of Persons with Disabilities | MSJE | Government of India (disabilityaffairs.gov.in)
21. The Skill Council for Persons with Disability (SCPwD). Read more at: Home | The Skill Council for Persons with Disability (scpwd.in)
23. Remote working innovations helping people with disabilities. Read more at: Remote working innovations helping people with disabilities | World Economic Forum (weforum.org)