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Empowerment of Trade: Enhancing Global Awareness to Disability Solutions

By Akhmad Bayhaqi, Chelsea Seah Jiaqi and Jin Lee

KEY MESSAGES

- International trade shapes access to essential goods, employment opportunities, and economic participation for persons with disabilities. However, current trade policies and agreements often overlook the needs and rights of persons with disabilities, despite their significant share of the global population.
- An analysis of trade treaties in APEC economies reveals a promising upward trend in the inclusion of disability provisions. However, the extent of this inclusion remains limited in scope and is still lacking proactive commitments to support people with disabilities.
- Assistive technology trade is economically significant and strategically important. In APEC, products such as glasses, orthotics, prosthetics, and hearing aids account for a substantial share of regional trade, underscoring the importance of predictable and affordable supply chains.
- While APEC has made progress in lowering tariffs on assistive products, complex tariff structures and high dutiable imports continue to pose significant barriers. Economies can further reduce or remove tariffs and simplify tariff categories to improve affordability and access to these essential goods.
- Aligning customs processes and regulatory frameworks across economies can help reduce non-tariff barriers, simplify importation, and ensure that assistive products reach those who need them without unnecessary delays or administrative burdens.
- Encouraging local manufacturing of assistive technologies and simplifying trade procedures can reduce dependency on imports, lower costs, and foster innovation within economies.
- Centring and meaningfully engaging persons with disabilities in the development and execution of policies is pivotal to create efficient and highly relevant policies, deepening trade benefits for society.
- Collaboration with companies to promote comprehensive hiring practices and accessible work environments not only expands opportunities for persons with disabilities, but also drives greater productivity and innovation across the workforce.
- APEC economies are advancing on raising awareness to provide solutions for people with disabilities through concrete measures, such as the Arequipa Goals (2024), which set targets for persons with disabilities' participation in the labour market and social safety nets. Strengthened collaboration with the business community and improved data collection are critical to drive progress.

Introduction

Fairer and broader access

Expanding access to trade benefits has been a prominent theme in the trade globalisation agenda. Stiglitz and Charlton observed that there is a widespread sentiment that trade globalisation has contributed to rising inequality and may even have reduced the standard of living for many in both developed and developing economies, despite raising income levels for some others[1]. They further argued that without proactive government policies, globalisation would have driven down wages for unskilled workers. As such, there is a need for broad consensus to implement sustainable policies that generate benefits reaching everyone.

Similarly, the World Trade Report 2024 acknowledged that while trade has played a key role in promoting global economic convergence and reducing poverty, some segments of society have been left behind[2]. It is argued that trade policy alone is insufficient; complementary domestic policies are essential to ensure broader access to the benefits of trade. These policies include improving access to education, developing capital markets, enhancing labour market regulations, and reducing labour market informality[3].

Stiglitz and Charlton also highlighted the importance of 'fair trade', whereby global trade not only liberalises markets, but does so in a manner that actively addresses historical imbalances, enables broad-based economic participation in developing and disadvantaged economies, and promotes socially desirable outcomes[4]. Fair trade emphasises non-discrimination and capacity building over mere tariff reduction. It also means ensuring that the benefits of globalisation and liberalised trade are shared broadly, including among persons with disabilities.

Despite these promising developments, current trade initiatives often overlook the rights and potential of persons with disabilities. Past trade initiatives have largely focused on empowering various groups, yet they tend to neglect persons with disabilities who make up a sizeable share of the global population, approximately 15 percent, or roughly 1 billion people[5]. This exclusion not only marginalises their voices in trade policy discussions, but also undermines efforts to boost economic productivity. For instance, Metts estimated that low- and middle-income economies lose between USD 473.9 and USD 672.2 billion annually due to loss of productivity among persons with disabilities[6].

This policy brief examines the relationship between international trade and persons with disabilities, evaluates how disability is addressed in trade agreements, analyses the trade dynamics of assistive products crucial for persons with disabilities, and finally discusses concrete recommendations for APEC economies to enhance participation and ensure that the benefits of trade are accessible to all.

Why do persons with disabilities matter in international trade?

The Convention on the Rights of Persons with Disabilities (CRPD) defines persons with disabilities as people who have long-term physical, mental, intellectual, or sensory impairments that may hinder their full and effective participation in society on an equal basis with others[7].

Beyond the equity case, expanding access to assistive technology also delivers substantial economic returns. A study estimates that investment in four assistive products – hearing aids, prostheses, eyeglasses, and wheelchairs – yields an approximate return on investment of 9:1[8]. Persons with disabilities are frequently sidelined in international trade discussions. Trade, however, has a profound impact on their lives: shaping access to essential goods, expanding employment opportunities and improving global economic participation. This section explores three critical channels through which trade affects persons with disabilities: trade policies, employment, and consumption.

1. Trade policies

Trade policies can influence the availability and affordability of essential goods and services. Trade agreements have the potential to lower tariffs on

[1] J. E. Stiglitz and A. Charlton, "Fair Trade for All: How Trade Can Promote Development" (Oxford University Press, 2007).
[2] World Trade Organization (WTO), "World Trade Report 2024: Trade and Inclusiveness" (WTO, 2024), https://www.wto-ilibrary.org/content/books/9789287076717.
[3] WTO, "World Trade Report 2024."
[4] Stiglitz and Charlton, "Fair Trade for All".
[5] M. Fontana and S. Mitra, "Inclusive Trade and Persons with Disabilities", Publications of the Ministry for Foreign Affairs of Finland 2023:12 (Ministry for Foreign Affairs of Finland, 2023), https://unctad.org/system/files/non-official-document/2023-10-19_ITPD_full_en.pdf.
[6] R. L. Metts, "Disability Issues, Trends and Recommendations for the World Bank," *Social Protection Discussion Paper* no. 0007 (World Bank, 2000), http://documents.worldbank.org/curated/en/503581468779980124.
[7] United Nations (UN), "Convention on the Rights of Persons with Disabilities and Optional Protocol" (UN, 2006), https://www.un.org/disabilities/documents/convention/convoptprot-e.pdf.
[8] ATscale, "The Case for Investing in Assistive Technology," November 2020, https://atscalepartnership.org/sites/default/files/2025-11/Case_for_Investing_in_AT_a11y.pdf.

imported goods, making assistive devices[9] (e.g., wheelchairs, hearing aids, and prosthetics) more affordable for people with disabilities. For example, the European Union (EU)'s Generalised Scheme of Preferences programme[10] allows developing economies to export goods to the EU, including medical devices, at reduced tariffs. This has lowered the cost of assistive devices in participating economies, improving affordability for persons with disabilities.

Presently, many assistive products are subject to tariffs at the border, increasing their cost: global average applied tariffs are approximately 5 percent for wheelchairs, orthotics, prosthetics, and hearing aids, and between 5 percent and 10 percent for spectacles and lenses; with some tariffs reaching as high as 35 percent[11]. Trade policies can reduce or even eliminate these tariffs, potentially making it more affordable for persons with disabilities who depend on such equipment.

Trade policy, with adequate enforcement mechanisms, also has a role to play in promoting accessible workplaces. Persistent physical or policy barriers may make some workplaces inaccessible to workers with disabilities. Corporations that prioritise profits over compliance may also fail to provide necessary workplace accommodations and accessible workstations, thereby exposing employees with disabilities to hazardous tasks and suboptimal working conditions. Ultimately, weak enforcement of disability rights further perpetuates these risks[12], widening the accessibility gap.

2. Employment

Trade can create job opportunities but also pose challenges for persons with disabilities if there are inadequate infrastructure and preparation in the workplace. Persons with disabilities are often excluded from the labour market, which limits their economic opportunities and increases their likelihood of being in poverty. Broad-based and fair-trade policies can help to create jobs for persons with disabilities, both in the formal and informal sectors.

Table 1 shows significant employment gaps between people with and without disabilities across some APEC economies. In economies such as Indonesia and the United States, the employment-to-population ratio for persons without disabilities is more than three times that of persons with disabilities. This underscores the need for targeted policies to improve job opportunities for persons with disabilities in formal employment.

Economy	Persons with Disabilities Employment (%)	Persons without Disabilities Employment (%)
Chile	29	60
Indonesia	19	66
Mexico (2020)	23.2	…
Papua New Guinea	46	51
Peru	34	73
United States	21	65
Viet Nam (2019)	7.9	…

Table 1. Employment-to-population ratio for persons with and without disabilities (2022)

Note: Data for Mexico and Viet Nam are from the World Bank Disability Data Hub.[13] Source: APEC Policy Support Unit (PSU) calculations based on data from International Labour Organization (ILO) Department of Statistics (2022).

A larger proportion of employed persons with disabilities are in self-employment or the informal sector, often due to the unique challenges that they face in securing formal employment. Their lower participation in the labour market has significant economic costs. An ILO study estimates gross domestic product (GDP) losses from disability exclusion in the range of 3 to 7 percent in some economies[14]. Globally, the Organisation for Economic Co-operation and Development (OECD) and Group of Twenty (G20) economies are shifting from generous disability benefits to policies that support those unable to work while encouraging those who can with incentives[15].

Also linked to the employment challenges faced by persons with disabilities is their limited education and schooling opportunities. Children with disabilities often

[9] Florence Agreement (1950): This UNESCO treaty, adopted by over 100 economies, eliminates tariffs on 'articles for the blind', such as braille devices and other tools for visually impaired individuals. Removing these trade barriers has enhanced access to essential assistive technologies for persons with disabilities globally. United Nations Educational, Scientific and Cultural Organization (UNESCO), *Agreement on the Importation of Educational, Scientific and Cultural Materials*, adopted 17 June 1950, opened for signature 22 November 1950, https://www.unesco.org/en/legal-affairs/agreement-importation-educational-scientific-and-cultural-materials-annexes-e-and-protocol-annexed.

[10] European Commission, "Generalised Scheme of Preferences," https://policy.trade.ec.europa.eu/development-and-sustainability/generalised-scheme-preferences_en (accessed 7 June 2026).

[11] UN, "Disability and Development Report 2024" (UN, 2024), https://social.desa.un.org/sites/default/files/inline-files/Goal17.pdf.

[12] L. Schur et al., "Is Disability Disabling in All Workplaces? Workplace Disparities and Corporate Culture, *Industrial Relations: A Journal of Economy and Society* 48, no. 3 (2009): 381–410, https://doi.org/10.1111/j.1468-232X.2009.00565.x.

[13] World Bank, "Employed (% of Persons by Disability)," https://disabilitydata.worldbank.org/en/indicator/empl (accessed 7 June 2026).

[14] S. Buckup, "The Price of Exclusion: The Economic Consequences of Excluding People with Disabilities from the World of Work," *Employment Working Paper 43* (International Labour Organization (ILO), 2009), https://www.ilo.org/sites/default/files/wcmsp5/groups/public/%40ed_emp/%40ifp_skills/documents/publication/wcms_119305.pdf.

[15] ILO and Organisation for Economic Co-operation and Development (OECD), "Labour Market Inclusion of People with Disabilities," paper presented at the 1st Meeting of the G20 Employment Working Group, Buenos Aires, Argentina, 20–22 February 2018.

struggle to access mainstream education due to a lack of accessibility. Overall educational attainment remains lower among adults with disabilities, who average 4.8 years of schooling compared to 7.0 years for their non-disabled counterparts across 22 economies[16].

Furthermore, Demographic and Health Surveys (DHS) data from five economies show that only 36 percent of adolescents with disabilities complete lower secondary education, compared to 53 percent of their non-disabled peers[17]. Those with sensory, physical, or intellectual disabilities are 2.5 times more likely to never attend school[18], and adults with disabilities complete high school at half the rate of those without disabilities[19]. Barriers to mainstream education also include prejudiced parental attitudes and financial hardship. Some parents still believe that children with disabilities might disrupt other students' learning[20], while others find that accommodating their children in Technical and Vocational Education and Training (TVET) programmes is too expensive[21].

Even if accessible, current education available to persons with disabilities tends to focus on skills catered to occupations on the lower end of global value chains like hospitality or retail, restricting career exploration in higher-value and knowledge-intensive fields like technology or academia[22]. This limited curriculum further hampers their self-actualisation as adults, hindering their independence and aspirations. This limitation feeds into the challenges faced by adults with disabilities in seeking fulfilling employment. Without equitable education, a negative loop is reinforced, confining persons with disabilities to self-employment or informal sector work, where earnings and social protections are typically lower.

Across some APEC economies where recent data are available, persons with disabilities consistently earn less than persons without disabilities, with monthly earnings ranging from 65 to 85 percent of non-disabled workers' earnings (Table 2).

Economy	Monthly earnings (%)
Chile (2017)	85
Indonesia (2021)	65
Peru (2021)	79
Thailand (2019)	73
United States (2021)	82

Table 2. Monthly earnings of persons with disabilities (as a percentage of the earnings of persons without disabilities)

Source: Disability Labour Market Indicators (DLMI) Database, ILOSTAT.

The connection between limited education and employment outcomes suggests an overhaul of current education systems and the expansion of opportunities for persons with disabilities, enabling them to achieve independence and fulfil their aspirations in varied fields – thus bridging the education-to-employment gap. Trade has the potential to achieve this through the 'trade policies' and 'consumption' channels.

3. Consumption

Broad-based and fair-trade policies can help to ensure that persons with disabilities have access to the products and services they need throughout their life stages, such as medicines and assistive technology products[23]. For example, trade agreements that reduce tariffs on pharmaceuticals could lower the cost of medications critical for managing chronic conditions common among persons with disabilities, such as diabetes or epilepsy, thereby improving their quality of life.

Moreover, enhanced access to assistive technologies could reduce barriers to employment for persons with disabilities, thus enabling more to benefit from employment opportunities generated by trade and reinforcing the 'employment' channel.

The presence of tariffs on assistive products would increase costs, which are ultimately passed on to producers and users. Furthermore, while the applied tariff level (AHS) for these products could be low, governments still have the option of increasing tariffs up to the bound rates without violating World Trade Organization (WTO) rules[24]. The existence of this difference between bound and effective rates – known as the 'tariff water' – creates substantial uncertainty for exporters and importers as economies could increase tariffs for assistive products up to the bound rates at any time. Estimates indicate that without the tariff water, exports could increase by as much as 12 percent[25].

[16] UNESCO, "Education and Disability: Analysis of Data from 49 Countries" (UNESCO, 2018), https://unesdoc.unesco.org/ark:/48223/pf0000262805.locale=en.
[17] UNESCO, "Education and Disability."
[18] UNESCO, "Global Education Monitoring Report 2020: Inclusion and Education: All Means All" (UNESCO, 2020), https://doi.org/10.54676/JJNK6989.
[19] UNESCO, "Higher Education Global Data Report" (UNESCO, 2022), https://unesdoc.unesco.org/ark:/48223/pf0000389859.
[20] UNESCO, "Global Education Monitoring Report 2020."
[21] UNESCO, "Ending Stigma and Discrimination in Training Institutions and Workplaces in Tanzania," 27 July 2023, https://www.unesco.org/en/articles/ending-stigma-and-discrimination-training-institutions-and-workplaces-tanzania.
[22] V. Stoevska, "New ILO Database Highlights Labour Market Challenges of Persons with Disabilities," *ILOSTAT*, 13 June 2022, https://ilostat.ilo.org/blog/new-ilo-database-highlights-labour-market-challenges-of-persons-with-disabilities/.
[23] Fontana and Mitra, "Inclusive Trade and Persons with Disabilities."
[24] W. A. Reinsch and C. T. Montaigu, "Navigating through Tariff Waters," Center for Strategic & International Studies, 8 August 2019, https://www.csis.org/analysis/navigating-through-tariff-waters.
[25] A. Osnago, R. Piermartini, and N. Rocha, "Trade Policy Uncertainty as Barrier to Trade," *WTO Working Paper ERSD-2015-05*, WTO, 26 May 2015, https://www.wto-ilibrary.org/content/papers/25189808/183/read.

Table 3 shows that the tariff water is significant for many types of assistive products.

Product Group	Simple Average		Average Tariff Water (percentage points)
	Bound Tariffs (%)	Effectively Applied Tariffs (%)	
Wheelchairs	16.4	1.1	15.4
Glasses, Lenses, Frames and Spectacles	18.4	2.6	15.8
Orthotics and Prosthetics	11.8	1.3	10.6
Hearing Aids	11.8	1.5	10.3
Others	13.0	0.9	12.1

Table 3: APEC tariff water in assistive products (2022)

Note: The tariff water is the difference between the average bound tariff (BND) and average effectively applied tariff (AHS). A simple average, instead of a weighted average, is used to exclude the potential impact of reduced trade and weights due to higher tariffs. Source: APEC PSU analysis based on data from the World Bank's World Integrated Trade Solution (WITS). Data for Russia are from 2021.

Reducing bound rates to more closely mirror applied tariffs would likely enhance value chain stability and predictability, thereby supporting trade in essential products for persons with disabilities.

Therefore, understanding these three critical channels highlights the multifaceted impact of trade on persons with disabilities, making it essential to examine how trade agreements currently address disability issues.

How disability is being approached in international trade

Analysing trade agreements with disability rights

Since the CRPD framework and its guidelines[26] call for government cooperation to advance the implementation of the rights of persons with disabilities, it is useful and relevant to understand how disability is included in existing trade agreements[27]. This allows us to identify the diffusion of specific disability narratives in trade agreements and the extent to which disability provisions are incorporated in such agreements.

Utilising the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)'s Regional Trade Agreement Text Analyzer[28], we qualitatively analysed the legal texts of 210 trade agreements signed among APEC members and mapped their provisions by associating them with a specific topic or category[29]. In addition, as the ESCAP's tool covers only agreements up to 2022, we have complemented the search to include newer trade agreements by using the Electronic Database of Investment Treaties (EDIT)[30].

Our emphasis is on explicit provisions[31], as they provide a more straightforward and unambiguous foundation for recognising disability-related commitments in trade agreements.

Quantitative analysis revealed that 88 of the agreements involving at least one APEC member economy contain explicit provisions that directly address disability-related issues. Most treaties referenced only one explicit term – such as 'disabled', 'handicapped', 'invalidity', or 'persons with disabilities' (see Figure 1).

Many trade agreements include provisions that protect the rights of persons with disabilities by referring to 'goods or services of handicapped/disabled persons'. The 2008 Peru–Singapore agreement, for example, explicitly allows for exceptions 'relating to the products or services of handicapped persons'[32]. Generally, it can be said that most provisions are exceptions clauses in government procurement chapters, allowing preferences for goods and services of persons with disabilities (or 'handicapped persons' in older texts) as part of vulnerable populations.

[26] UN, "Guidelines on Treaty-specific Document to Be Submitted by States Parties under Article 35, Paragraph 1, of the Convention on the Rights of Persons with Disabilities" (UN, 2009).
[27] F. Jaramillo Ruiz, R. Nielsen, and R. Fagundes Cezar, "The Inclusion of Disability as a Non-trade Issue in Preferential Trade Agreements," *Global Social Policy* 23, no. 1 (2022): 148–66, https://doi.org/10.1177/14680181221136972.
[28] M. Semenova, A. Kravchenko, and Y. Duval, "ESCAP Regional Trade Agreement Text Analyzer 1.0. User Guide" (Trade, Investment and Innovation Division, United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 2023), https://tiid.shinyapps.io/text-analysis-tool/.
[29] The database covers agreements from 1948–2022. A list of the agreements is available at ESCAP, "ESCAP's RTA Text Database," as of 4 July 2023, https://legal.tina.trade/app/assets/js/tina/data/ESCAP%20trade%20agreement%20database%20-%20Brief%20description.pdf.
[30] A. Alschner, M. Elsig. and R. Polanco, "Introducing the Electronic Database of Investment Treaties (EDIT): The Genesis of a New Database and Its Use," *World Trade Review* 20, no. 1 (2021): 73–94, https://doi.org/10.1017/S147474562000035X.
[31] The list of explicit provisions used in qualitative analysis is provided in Table A.2.
[32] Enterprise Singapore, "Chapter 9: Government Procurement," https://www.enterprisesg.gov.sg/-/media/esg/files/non-financial-assistance/for-companies/free-trade-agreements/Peru_Singapore_FTA/Legal_text/Chapter_9_Government_Procurement (accessed 7 June 2026).

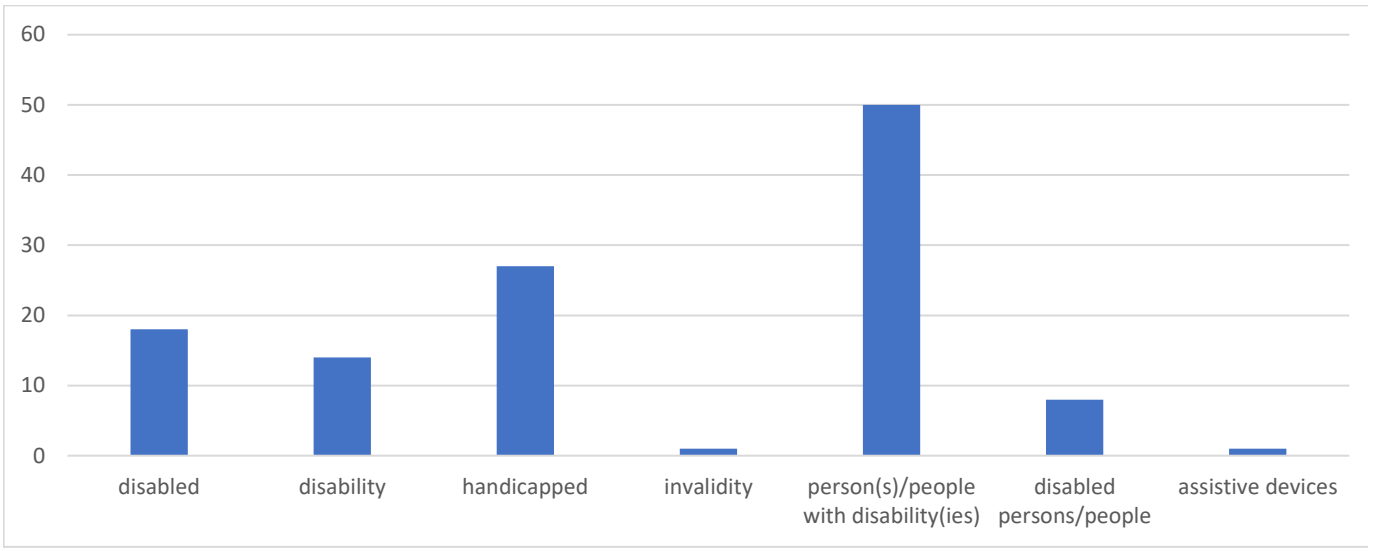

Figure 1. Frequency of explicit disability-related terms in provisions across 88 agreements involving APEC economies (1992–2025)

Source: APEC PSU analysis based on data from the ESCAP Regional Trade Agreement Text Analyzer and the Electronic Database of Investment Treaties (EDIT).

Across 88 agreements involving APEC economies, more than 70 percent contain such clauses on government procurement or purchases. Jaramillo Ruiz et al. view this as reflecting governments' preference for clauses that exempt them from obligations rather than impose additional responsibilities[33].

Other occurrences in APEC agreements mention disability with respect to social insurance or social protection for disabled workers[34]. This provision is consistent with Articles 27 and 28 of the CRPD, which require economies to protect and advance the right to work, including for individuals who acquire a disability while employed[35]. Governments are expected to implement appropriate measures such as enacting legislation to guarantee employee access to pensions, as well as social and disability insurance.

Some trade agreements have a different approach as they view 'people with disabilities as capable of active participation …, as opposed to relegating disabled persons to a category that needs to be merely protected'[36].

Wording of this kind appears in several earlier-generation agreements. For example, the 2002 EU–Chile Association Agreement includes language that prioritises disadvantaged groups in areas such as education and social cooperation. In the education and training article, the parties agree to support pre-schooling, basic, intermediate and higher education, vocational training and life-long learning in which 'special attention will be paid to access to education for vulnerable social groups such as the disabled, ethnic minorities and the extremely poor', while the social cooperation article similarly provides that 'special attention will be paid to low-income families and disabled persons'[37].

A more recent example appears in the labour cooperation provisions of the 2018 Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which commits parties to the 'promotion of equality and elimination of discrimination in respect of employment and occupation for migrant workers, or in the areas of age, disability and other characteristics not related to merit or the requirements of employment'.[38] The UK–Australia Free Trade Agreement (FTA) (2021), UK–Viet Nam FTA (2020), EU–Viet Nam FTA (2019) and United States–Mexico–Canada Agreement (USMCA) (2018) contain similar commitments within their respective labour chapters. In addition, the CPTPP, USMCA, and UK–Australia FTA also link persons with disabilities with the issue of diversity in the workplace.

[33] Jaramillo Ruiz et al., "The Inclusion of Disability as a Non-Trade Issue in Preferential Trade Agreements."
[34] Jaramillo Ruiz et al. categorise these as 'Type 2 clauses' in preferential trade agreements, which allow workers in the economies that are parties to the agreement to reside in those economies and move between them while accruing and maintaining disability pensions. See Jaramillo Ruiz et al., "The Inclusion of Disability as a Non-trade Issue in Preferential Trade Agreements."
[35] The Eurasian Economic Union (EAEU) also uses the term 'temporary disability'. See Jaramillo Ruiz et al., "The Inclusion of Disability as a Non-trade Issue in Preferential Trade Agreements."
[36] Jaramillo Ruiz et al., "The Inclusion of Disability as a Non-trade Issue in Preferential Trade Agreements."
[37] Electronic Database of Investment Treaties (EDIT), "Chile–EC Association Agreement (2002)," 2002, https://edit.wti.org/document/show/ebf3e929-97e7-4c81-a1e5-47b629031aba.
[38] New Zealand Ministry of Foreign Affairs & Trade, "Chapter 19 (Labour) of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)," 8 March 2018, https://www.mfat.govt.nz/assets/Trade-agreements/TPP/Text-ENGLISH/19.-Labour-Chapter.pdf.

Additionally, the Chile–EU Advanced Framework Agreement (2023) explicitly mentions 'the importance of complying with the accessibility obligations under the UN Convention on the Rights of Persons with Disabilities' under the chapter on Economic, Social and Cultural Partnership. Parties also agree to cooperate to 'identify and exchange good practices on assistive devices…'.

'Persons with disabilities' clauses are also included in Small and Medium Enterprises (SMEs) chapters, as apparent in the United Kingdom–Australia FTA (2021) and Canada–Indonesia Comprehensive Economic Partnership Agreement (CEPA) (2025). In the Canada–Indonesia CEPA, 'The Parties also acknowledge that SMEs owned or operated by women, Indigenous Peoples, persons with disabilities, youth, and other under-represented groups may require additional or targeted support to enhance their growth, competitiveness and access to international trade and investment'.

Jaramillo Ruiz et al. note that provisions referring to persons with disabilities as capable of active participation appear in only 3 percent of all global Preferential Trade Agreements negotiated between 1948 and 2020[39]. While these clauses are theoretically more inclusion-oriented – reflecting elements of the social model of disability – they nonetheless remain limited in practice and still suffer from significant operational shortcomings.

More broadly, they exemplify the constraints highlighted by Bahri, whereby disability-related clauses tend to be broad, symbolic, generic, and transplanted from earlier templates, reinforcing a pattern of copy-paste provisions that hinders more innovative and meaningful approaches to disability inclusion in trade agreements[40].

Figure 2 charts the cumulative number of disability-related explicit provisions found in agreements signed over time by APEC member economies. Notably, the number of provisions containing explicit disability wordings increased markedly in 2014 and 2018, signalling a growing recognition of the need to address disability rights in international trade. Nevertheless, the variation across economies highlights the importance of further efforts to mainstream disability inclusion in trade policies.

While the inclusion of disability provisions in trade agreements is important, the actual trade flows and barriers related to goods crucial for persons with disabilities also play a significant role.

Trade-related goods of special significance to persons with disabilities

1. WHO Priority Assistive Products List

In 2016, the World Health Organization (WHO) launched its Priority Assistive Products List (APL) to improve global access to essential assistive products. The APL – covering hearing aids, wheelchairs, communication aids, spectacles, artificial limbs, pill organisers, memory aids, and more – serves as a global standard for ensuring that persons with disabilities can live healthily, productively, and with dignity.

Assistive products and services, combined into the term 'assistive technology' (AT), encompass both products and services designed to support individuals with

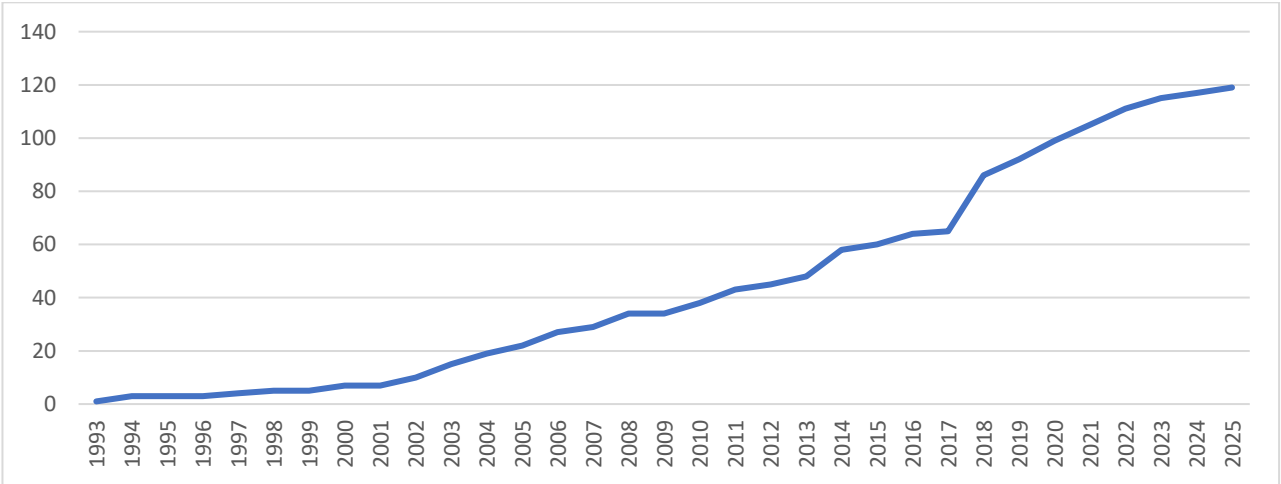

Figure 2. Number of cumulative provisions containing explicit disability-related wordings across 88 agreements involving APEC economies (1993–2025)

Source: APEC PSU analysis based on data from the ESCAP Regional Trade Agreement Text Analyzer and EDIT.

[39] Jaramillo Ruiz et al., "The Inclusion of Disability as a Non-trade Issue in Preferential Trade Agreements."

[40] A. Bahri, "Trade Agreements and Disability Inclusion: Demystifying the Disconnect Between Barriers and Policy Solutions," (United Kingdom Foreign, Commonwealth and Development Office and TAF2+, 2024).

Box 1. AI can empower persons with disabilities if policy and investment catch up

Emerging technologies such as artificial intelligence (AI) are increasingly influencing the development and deployment of assistive technologies that are essential to maximising the potential of persons with disabilities – it is imperative that no one is left behind in that progress.

AI technologies like eye tracking and voice recognition help people with disabilities access information and communicate; they also support independent living by providing care through robots and other tools[1]. AI algorithms enhance smart mobility aids, geolocation tools, bionic devices, and rehabilitation technology. They assist people with hearing or visual impairments through computer vision and image-to-sound conversion, and also offer support for cognitive disabilities linked to ageing, mental health, autism, dyslexia, attention deficit, and emotion recognition challenges[2].

When used in workplaces, these technologies reduce the need for in-person support for persons with disabilities. Even employees without disabilities benefit from accessibility tools, using them to boost their own productivity[3]. As a result, these tools have broader applications across office settings.

However, the development and scaling of assistive technologies and AI are inherently more complex than for most emerging technologies, for the following key reasons[4]: (i) These solutions operate within multi-stakeholder environments, involving not only end users but also caregivers, families, and support providers, which increases design and evaluation complexity; (ii) At the technical level, AI models optimised for population-wide performance may inadvertently introduce bias and exclude specific disability groups, reducing accuracy and usability; (iii) Assistive technologies must comply with multiple, overlapping policy and rights-based frameworks, including disability, child protection, and age, among others, adding further regulatory complexity.

Given these challenges, most general investors may perceive AI assistive technology investments as less profitable and are less likely to invest. Overall, the assistive technology sector has historically experienced fragmentation, insufficient funding, and limited attention in global economic and health dialogues[5].

Policies and regulations affecting tariffs, standards, and procurement shape whether assistive technologies remain niche products or become widely accessible tools for inclusion. Evidence shows that higher tariffs and regulatory costs raise prices for essential assistive devices, forcing firms to absorb losses or pass costs on to users. In addition, policy uncertainty and fragmented frameworks further deter investment in a sector already characterised by long development cycles and low volume production[6].

[1] United Nations Human Rights Council, "Report of the Special Rapporteur on the Rights of Persons with Disabilities," 2016.
[2] Y. Welker, "How Sovereign Funds Could Empower the Future of Assistive Technology and Disability AI," *World Economic Forum*, 2023, https://www.weforum.org/stories/2023/08/sovereign-funds-future-assistive-technology-disability-ai/.
[3] C. Touzet, "Using AI to Support People with Disability in the Labour Market: Opportunities and Challenges," *OECD Artificial Intelligence Papers* 7, 2023, https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/11/using-ai-to-support-people-with-disability-in-the-labour-market_e9463967/008b32b7-en.pdf.
[4] Welker, "How Sovereign Funds Could Empower the Future of Assistive Technology and Disability AI."
[5] ATscale, "The Case for Investing in Assistive Technology," November 2020.
[6] C. Dibenedetto, "People with Disabilities are 'Eating the Cost' of Tariffs," *Mashable SE Asia*, 23 August 2025, https://sea.mashable.com/tech/39213/people-with-disabilities-are-eating-the-cost-of-tariffs.

disabilities. Given the diversity of devices – from low-tech aids to complex systems – the provision of AT is inherently complex[41]. The CRPD establishes an international legal obligation for facilitating AT access, thereby emphasising dignity, autonomy, and broad-based participation; while setting standards to ensure the availability, knowledge, and use of AT[42].

Government action to support AT access should encompass several key measures. First, there should be a focus on diversifying sources, including not just promoting trade, but promoting domestic production as well[43]. This effort can be complemented by streamlining trade arrangements, which involves simplifying trade procedures and removing unnecessary barriers. In addition, developing uniform technical and regulatory frameworks is essential for harmonising standards and reducing compliance costs.

2. Trade values and shares

The trade value for assistive products is significant for APEC. For example, 'Glasses, Lenses, Frames and

[41] L. Witte et al., "Assistive Technology Provision: Towards an International Framework for Assuring Availability and Accessibility of Affordable High-Quality Assistive Technology," *Disability and Rehabilitation: Assistive Technology* 13, no. 5 (2018): 467–72, https://doi.org/10.1080/17483107.2018.1470264.

[42] Witte et al., "Assistive Technology Provision."
[43] World Health Organization and World Bank, "World Report on Disability (Summary)," 2011, https://iris.who.int/bitstream/handle/10665/70670/WHO_NMH_VIP_11.01_eng.pdf?sequence=1.

Spectacles' dominated APEC exports with an approximate value of USD 14.4 billion in 2023, representing 37.5 percent of total exports, while its imports accounted for 26.4 percent of total imports (Table 4). 'Orthotics and Prosthetics' also commanded a significant role with exports valued at roughly USD 13.7 billion (35.6 percent share) and imports reaching USD 20.9 billion (46.8 percent share), underscoring its importance in the region. 'Hearing Aids' captured a moderate share, representing 6.1 percent of APEC exports (USD 2.3 billion) and 8.9 percent of imports (USD 4 billion).

Globally, as shown in Table 5, although 'Glasses, Lenses, Frames and Spectacles' remain significant (contributing 27.4 percent of exports and 26.2 percent of imports), 'Orthotics and Prosthetics' dominate global trade, representing 44.8 percent of exports and 45.8 percent of imports. Meanwhile, 'Hearing Aids' account for approximately 6.2 percent of exports (USD 5.7 billion) and 7.7 percent of imports (USD 6.8 billion).

3. Tariff analysis and structure

Using 2022 data, our analysis shows that tariff policies for assistive products varied significantly across economies, revealing key insights and challenges that affect affordability and market access. Detailed analyses across Tables 6, 7, A.3. and A.4. provide insights into dutiable imports, effectively applied tariffs, tariff line complexity, and the prevalence of zero-tariff regimes.

Table 6 shows that overall, more than 98 percent of global and APEC imports of assistive products were still dutiable under bound tariff, with some categories – such as contact lenses (900130), spectacle lenses (900140, 900150), and spectacle frames (900311, 900319, 900390) – showing close to or 100 percent dutiable imports across both global and APEC markets.

While the percentage of actual tariff applied is very low, the existence of bound tariffs mean that these duties can be potentially raised, increasing costs for end users and restricting market access, particularly impacting smaller importers.

Product Groups	Values (USD thousands)		Share in Total APEC Assistive Product Trade (%)	
	Exported Value	Imported Value	Exported Value	Imported Value
Wheelchairs	2,006,069	1,531,197	5.2%	3.4%
Glasses, Lenses, Frames and Spectacles	14,433,897	11,817,920	37.5%	26.4%
Orthotics and Prosthetics	13,714,593	20,913,727	35.6%	46.8%
Hearing Aids	2,340,834	3,971,646	6.1%	8.9%
Others	6,021,673	6,460,249	15.6%	14.5%
Total	38,517,066	44,694,739	100%	100%

Table 4. APEC exported and imported values (USD thousands), and share in total APEC trade values for each product group (%) (2023)

Note: 'Wheelchairs' include HS code 871310, 871390, 871420; 'Glasses, Lenses, Frames and Spectacles' include HS code 701510, 900130, 900140, 900150, 900311, 900319, 900390, 900490; 'Orthotics and Prosthetics' include HS code 902110, 902131, 902139; 'Hearing Aids' include HS code 902140, 'Others' include HS code 902190. Source: APEC PSU calculations based on data from WITS (UN Comtrade). Data for Japan; Korea; and Viet Nam are from 2022. Data for Russia and Papua New Guinea are from 2021.

Product Groups	Values (USD thousands)		Share in Total Global Assistive Product Trade (%)	
	Exported Value	Imported Value	Exported Value	Imported Value
Wheelchairs	3,107,402	2,906,359	3.4%	3.3%
Glasses, Lenses, Frames and Spectacles	25,265,097	23,279,192	27.4%	26.2%
Orthotics and Prosthetics	41,252,747	40,640,563	44.8%	45.8%
Hearing Aids	5,717,381	6,843,653	6.2%	7.7%
Others	16,791,105	15,055,103	18.2%	17.0%
Total	92,133,731	88,724,870	100%	100%

Table 5. World exported and imported values (USD thousands), and share in total trade values for each product group (%) (2023)

Source: APEC PSU calculations based on data from WITS (UN Comtrade).

Product Groups	Product code	APEC			Global		
		% of dutiable imports			% of dutiable imports		
		AHS	MFN	BND	AHS	MFN	BND
Wheelchairs	871310	4.1%	5.1%	90.5%	6.2%	6.7%	97.6%
	871390	3.4%	4.3%	97.1%	3.3%	3.7%	99.0%
	871420	3.5%	4.0%	97.7%	4.0%	4.3%	99.2%
Glasses, Lenses, Frames and Spectacles	701510	12.1%	45.2%	100.0%	8.4%	10.5%	100.0%
	900130	43.2%	51.4%	99.9%	44.1%	63.3%	99.7%
	900140	36.1%	44.1%	100.0%	69.9%	79.0%	100.0%
	900150	36.7%	75.4%	100.0%	52.7%	85.6%	99.9%
	900311	62.3%	74.4%	100.0%	71.0%	82.2%	100.0%
	900319	25.3%	32.8%	100.0%	53.7%	64.8%	99.9%
	900390	39.0%	48.9%	100.0%	68.2%	77.3%	100.0%
	900490	59.0%	86.2%	100.0%	70.3%	88.8%	99.2%
Orthotics and Prosthetics	902110	19.7%	20.1%	97.6%	9.9%	10.9%	98.8%
	902131	11.4%	11.5%	98.8%	7.3%	7.4%	99.3%
	902139	13.2%	13.2%	97.2%	10.7%	10.8%	98.3%
Hearing aids	902140	6.7%	8.7%	99.0%	4.9%	5.9%	99.3%
Others	902190	4.6%	4.7%	95.7%	3.4%	3.5%	98.1%

Table 6. Comparison of dutiable imports for assistive products (2022)

Note: Dutiable Imports refer to trade value facing a tariff above 0%. Data for Russia are from 2021. Three tariff regimes are used in this paper. Effectively applied tariffs (AHS) capture the actual duty rate charged at the border for a given importer and origin, i.e., the lowest available rate (preferential, if applicable; otherwise, the most-favoured-nation (MFN) applied rate). MFN applied tariffs are the standard non-preferential rates an economy applies to WTO members in the absence of a preference. Bound tariffs (BND) are WTO 'ceiling' commitments – maximum rates that an economy may apply; these are typically higher than applied rates and create 'tariff water' (bound rate minus applied rate), which is a key source of policy uncertainty for traders. Source: APEC PSU calculations based on data from WITS (TRAINS).

Table 7 presents a comparison of APEC and the world tariff profile. APEC's profile is more favourable in terms of its lower applied tariff rate – 1.9 compared to a global average of 2.2 percent. APEC's tariff profile is also more liberal: a closer look at the tariff line levels shows that less than 1 percent of APEC's lines is subject to 10–20 percent duties. Conversely, 4.7 percent of tariff lines globally fall in the same category.

However, the substantial concentration of APEC's mid-range tariffs (5–10 percent) indicates that further liberalisation is still possible to advance affordability and align tariff policy more closely with accessibility objectives for assistive products.

a. MFN tariff lines and zero tariff coverage

Table A.3. (see Annex) reveals variations in tariff line complexity by reporting the number of most-favoured-nation (MFN) tariff lines associated with each 6-digit HS code. On a global scale, most economies simplify tariffs by using a single tariff line per product, a practice largely mirrored by APEC. Exceptions occur in certain categories. For instance, wheelchair parts (871420) and spectacle frames (900319) see more than six APEC economies applying multiple tariff lines, thereby increasing trade complexity.

The situation is even more pronounced for diverse eyewear products classified under HS code 900490. Here, approximately 74.3 percent (107) of economies globally and 71.4 percent (15) within APEC use two to four tariff lines, while only 23.6 percent (34) globally and 23.8 percent (5) in APEC opt for one. This reflects the diverse nature of eyewear products and components, which vary in intended use, material composition, and regulatory requirements. To accommodate these differences, economies may tailor tariffs to specific subcategories, employing multiple tariff lines. While this may ensure a more precise taxation, it adds complexity to the classification process.

Tariff Profile	World	APEC
Simple average of effectively applied tariffs	2.2	1.9
Total number of tariff lines	53,552	12,601
Percentage of tariff lines with positive duties	36.6%	41.8%
Percentage of tariff lines with tariff between 5 and 10%	9.3%	21.6%
Percentage of tariff lines with tariff between 10 and 20%	4.7%	0.8%

Table 7. Effectively applied tariffs (AHS) for assistive products (2022)

Source: APEC PSU calculations based on data from WITS (TRAINS).

Table A.4. (see Annex) focuses on the share of economies implementing zero MFN tariffs. Globally, the prevalence of zero tariffs varies considerably by product. For instance, only 24.3 percent of economies apply zero tariffs on spectacle frames (900311), while up to 84.0 percent do so for certain medical devices (902190). In general, mobility aids and essential medical devices tend to enjoy high levels of zero-tariff coverage, often exceeding 80 percent.

Within APEC, the proportion of economies granting zero-tariff treatment is consistently higher across most products, and non-zero tariff ranges are generally narrower. For example, 57.1 percent of APEC economies apply zero tariffs to glasses (701510), compared to just 36.8 percent globally. However, exceptions remain: for wheelchairs (871310), APEC's zero-tariff coverage (76.2 percent) lags behind the global figure (81.3 percent).

This pattern underscores APEC's relatively more liberalised tariff regime while also pointing to lingering pockets of barriers that merit further reform.

For the disability community, such complexities have direct implications. Higher tariff incidence – even at low percentages – can raise the overall cost of essential assistive technologies. This not only affects individual affordability but also limits the scope for public and private programmes aimed at widespread device distribution to persons with disabilities. Reducing tariffs, particularly on high-demand assistive products, would help lower the final consumer cost and improve accessibility.

b. Risk of misclassification due to incomplete documentation

A relevant case illustrates how administrative misinterpretation and documentation gaps can affect the importation of assistive technologies. In December 2022, OHFA Tech, a Korean company, donated 20 electronic Braille-learning keyboards (prototype) known as *Taptilo* to a Special Needs School in Jakarta to support inclusive education. When the shipment arrived at Soekarno-Hatta International Airport, it was processed as a regular import (*barang kiriman*) rather than as a donation (*hibah*), resulting in the application of import duties and taxes amounting to several hundred million rupiah. This temporary barrier caused by the misclassification and high tariff delayed delivery of the devices to the school for almost two years[44].

Ambiguous or insufficient regulations regarding donated or socially purposed goods can create uncertainty, particularly when documentation is lacking or unclear. Following public attention and subsequent review by Indonesia's Ministry of Finance, the shipment was reclassified and granted exemption, which provides import duty waivers for donated goods used for education, research, and social purposes. The resolution enabled the release of the devices without duties or taxes. This example underscores the importance of clear documentation, awareness of exemption mechanisms, and simplified customs procedures to ensure that AT for persons with disabilities can reach their intended beneficiaries efficiently and without unnecessary delay.

Comparable classification challenges have been observed in other economies. In Canada, for instance, the Canada Border Services Agency (CBSA) administers Tariff Item No. 9979.00.00, covering 'goods specifically designed to assist persons with disabilities in alleviating the effects of those disabilities'. CBSA Memorandum D10-15-24[45] sets out detailed eligibility and documentation requirements for importers to claim this duty-free treatment, underscoring that the benefit applies only when the goods' design intent and supporting evidence are clearly demonstrated. In cases where documentation is incomplete or ambiguous, classification outcomes can differ and duty exemptions may not be granted. To facilitate easier classification, the CBSA also maintains a list of Medical and Assistive

[44] N. Rahmah, "Tanggung jawab Bea Cukai atas pengenaan penilaian barang hibah Taptilo yang bukan merupakan objek pajak ditinjau dari Undang-Undang Nomor 17 Tahun 2006 tentang Kepabeanan" (Customs' Responsibility for the Assessment of Donated Taptilo Goods that Do Not Constitute Taxable Objects: A Review of Law No. 17 of 2006 on Customs), *Bandung Conference Series: Law Studies* 5, no. 11 (2025): 149–54.

[45] Canada Border Services Agency, "Memorandum D10-15-24: Tariff Item No. 9979.00.00 – Goods Specifically Designed to Assist Persons with Disabilities," 21 October 2024, https://www.cbsa-asfc.gc.ca/publications/dm-md/pdf/d10-15-24-eng.pdf.

Devices[46], that are deemed to automatically qualify for the benefits under tariff item 9979.00.00, thereby reducing uncertainty for importers and promoting consistent application of the exemption.

4. Overall implications

The high trade values of assistive products indicate their importance in global markets, yet the persistence of tariffs, even at low levels, can still pose barriers to affordability and access, particularly for persons with disabilities in developing economies.

The observed patterns suggest that tariff liberalisation has progressed, particularly in APEC, but challenges remain. High dutiable imports coupled with complex tariff structures can elevate costs and constrain accessibility for assistive products. To enhance affordability and improve trade efficiency, policymakers should consider reducing or eliminating tariffs for specific product categories. Simplifying tariff structures by consolidating multiple tariff lines for heterogeneous products can also reduce compliance burdens.

Additionally, harmonising customs procedures and regulatory standards is crucial to addressing non-tariff barriers. Finally, increased regional cooperation could facilitate the sharing of best practices and support local production, thereby strengthening supply chain resilience and innovation. Regional AT policy alignment also requires robust metrics and accountability mechanisms to better identify bottlenecks in the system. For persons with disabilities who rely on these products for independence, mobility, and enhanced participation in society, even small cost increases can have outsized negative impacts. Addressing these issues will be essential to ensure that vital AT become both affordable and accessible on a global scale.

Role of APEC: from principles to action

APEC members have progressed from setting principles to implementing actions that address persons with disabilities. For example, under a study related to the APEC Connectivity Blueprint, Chinese Taipei has submitted a case study on improving people-to-people connectivity through accessible tourism for persons with disabilities[47].

Elderly and disabled individuals often face mobility issues in public places, and travellers with disabilities can find holiday destinations inaccessible. Businesses like restaurants and hotels invest in accessibility but often see their persons with disabilities-friendly facilities underutilised. For these investments to be justified, accessible facilities must be used more frequently.

Moreover, a social enterprise in Chinese Taipei[48] shows that working with marginalised groups can be profitable. This is achieved by adopting a collaborative model for accessible tourism; involving government, private sector, civil society, the elderly, and persons with disabilities to develop effective solutions and policies for accessibility.

The APEC Human Resources Development Working Group (HRDWG) has integrated disability considerations into its work programme, reinforcing a broader effort to ensure that the benefits of trade extend to all segments of society.

A significant milestone in this progression was the 2024 endorsement of the Arequipa Goals[49]. These goals set measurable targets for increasing the participation of persons with disabilities in the formal labour market and for broadening social safety net coverage to also cater for vulnerable populations in rural areas. This framework aligns with the Detroit Non-Binding Principles and Recommendations for Equality and Inclusion in Education, Training, and Employment (2023)[50] and reinforces the region's commitment to translating fundamental principles into tangible outcomes.

Central to efforts championing disability rights is the establishment of concrete indicators to monitor progress in promoting disability issues. Adopting a shared, clear definition of disability across APEC economies would facilitate the design of precise policy responses. Enhanced data collection—such as through improved Labour Force Survey Disability Module (LFS-DM)[51]—can provide the empirical foundation necessary for measuring the impact of these policies and driving

[46] Government of Canada, "Medical and Assistive Devices," https://www.canada.ca/en/revenue-agency/services/forms-publications/publications/4-2/medical-assistive-devices.html (accessed 7 June 2026).
[47] A. Bayhaqi, E. A. San Andres, and S. K. Singh, "Case Studies on Addressing Connectivity Challenges in APEC Economies" (APEC, 2018), https://www.apec.org/publications/2018/11/case-studies-on-addressing-connectivity-challenges-in-apec-economies.
[48] C. Lin, "Innovating Accessible Tourism for Social Inclusion," *The Head Foundation,* 14 July 2019, https://digest.headfoundation.org/2019/07/14/innovating-accessible-tourism/.
[49] APEC Human Resources Development Working Group (HRDWG), "APEC Commits to Empowering People with Disabilities" (APEC, 2024), https://www.apec.org/press/news-releases/2024/apec-commits-to-empowering-people-with-disabilities.
[50] APEC HRDWG, "Human Resources Development Working Group Detroit Non-Binding Principles and Recommendations for Equality and Inclusion in Education, Training, and Employment (Endorsed)" (APEC, 2023), https://mddb.apec.org/Documents/2023/HRDWG/HRDWG/23_hrdwg_008.pdf.
[51] Washington Group on Disability Statistics, "The Washington Group / ILO Labor Force Survey Disability Module (LFS-DM)," 2023, https://www.washingtongroup-disability.com/question-sets/wg-ilo-labor-force-survey-disability-module-lfs-dm/.

further improvements while considering the unique environments across APEC economies.

Furthermore, it is important to holistically identify immediate barriers that persons with disabilities face in their respective economies. For example, Project Travelling Together examined the impacts of roads on the lives of persons with disabilities in Papua New Guinea[52]. By gathering the views of the persons with disabilities themselves, researchers were able to better contribute to the development of guidelines for roads. This illustrates that the deliberate involvement of persons with disabilities from the beginning of such projects is imperative to ensure findings and recommendations that are applicable and relevant.

Lastly, APEC recognises the critical role that the private sector plays in fostering equal opportunity, through hiring practices and work environments. Economies should collaborate with companies and raise awareness of the benefits of having a workplace that boosts broad-based participation. Research indicates that firms adopting best practices to support persons with disabilities outperform their counterparts in shareholder value and productivity[53]. In addition, hiring persons with disabilities not only enlarges the talent pool but also fosters a more innovative work environment. This enhances the broader application of their products and services towards all segments of the society, ultimately driving greater profitability and growth. Initiatives like the World Economic Forum's 'The Valuable 500' illustrate how business leaders can drive improvements by promoting practices that enhance workplace equality and innovation[54].

Conclusion

Overall, advancing disability inclusion through trade requires several approaches. Simplifying tariff schedules, aligning customs and regulatory requirements, and improving trade facilitation can reduce both cost and delay, while support for local production can strengthen resilience and spur innovation.

Just as importantly, policies will be more effective when persons with disabilities are meaningfully engaged in their design and implementation, and when governments work with the business community to expand inclusive hiring and accessible workplaces.

Building on concrete commitments such as the Arequipa Goals developed by the HRDWG, stronger collaboration and better data are essential to track progress and ensure that the benefits of trade translate into tangible opportunities, thereby unlocking the growth potential of people with disabilities.

The Authors

The APEC Policy Support Unit team includes **Akhmad Bayhaqi** (Senior Analyst), **Chelsea Seah Jiaqi** (Researcher) and **Jin Lee** (former Intern).

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About APEC PSU

The **APEC Policy Support Unit (PSU)** is the policy research and analysis arm for APEC. It supports APEC members and fora in improving the quality of their deliberations and decisions and promoting policies that support the achievement of APEC's goals by providing objective and high-quality research, analytical capacity and policy support capability.

Address: 35 Heng Mui Keng Terrace,
Singapore 119616
Website: www.apec.org/who-we-are/research-and-analysis
E-mail: psugroup@apec.org

APEC#226-SE-01.5

[52] C. Whitzman, K. James, and I. Powaseu, "Travelling Together: Improving the Access of People with Disability to Road Infrastructure in Papua New Guinea," *AusAID Researching Working Paper 2*, 2013, https://www.dfat.gov.au/sites/default/files/travelling-together-working-paper.pdf.

[53] Accenture, "Getting to Equal: The Disability Inclusion Advantage," 2018, https://www.accenture.com/content/dam/accenture/final/a-com-migration/pdf/pdf-89/accenture-disability-inclusion-research-report.pdf.

[54] G. Ryder, "Getting People with Disabilities into Work Requires Data," World Economic Forum, 18 February 2020, https://www.weforum.org/stories/2020/02/getting-people-with-disabilities-into-work-requires-data/.

Annex

Table A.1. HS code Product table

Family	Product code	Product name
Wheelchairs	871310	Carriages for disabled persons; not mechanically propelled
	871390	Carriages for disabled persons; mechanically propelled
	871420	Carriages for disabled persons; parts and accessories thereof
Glasses, Lenses, Frames and Spectacles	701510	Glasses for corrective spectacles; curved, bent, hollowed or the like, not optically worked
	900130	Lenses, contact; unmounted, of any material, excluding elements of glass not optically worked
	900140	Lenses, spectacle; unmounted, of glass, excluding elements of glass not optically worked
	900150	Lenses, spectacle; unmounted, of materials other than glass
	900311	Frames and mountings; for spectacles, goggles or the like, of plastics
	900319	Frames and mountings; for spectacles, goggles or the like, of materials other than plastics
	900390	Frames and mountings; parts for spectacles, goggles or the like
	900490	Spectacles, goggles and the like; (other than sunglasses) corrective, protective or other
Orthotics and Prosthetics	902110	Orthopaedic or fracture appliances
	902131	Artificial parts of the body
	902139	Artificial parts of the body; excluding artificial joints
Hearing aids	902140	Hearing aids (excluding parts and accessories)
Others	902190	Appliances; worn, carried or implanted in the body, to compensate for a defect or disability

Source: World Bank, World Integrated Trade Solution (WITS).

Table A.2. List of keywords used in qualitative analysis

Explicit provisions
disabled
disabilit#
differently.abled
handicapped
invalidity
less.able.bodied
persons.with.disabilit#
assistive devices

Source: Adapted from A. Bahri, "Making Trade Agreements Work for People with Disabilities: What's Been Achieved and What Remains Undone?," (United Kingdom Foreign, Commonwealth and Development Office and TAF2+, 2022).

Table A.3. Percentage of economies applying 1, 2–4 or 5+ MFN tariff lines to each product code in 2022 (%)

Family name	Product code	World			APEC		
		1 Tariff Line	2–4 Tariff Lines	5+ Tariff Lines	1 Tariff Line	2–4 Tariff Lines	5+ Tarriff Lines
Wheelchairs	871310	98.6	1.4	0.0	100.0	0.0	0.0
	871390	97.2	2.8	0.0	100.0	0.0	0.0
	871420	91.7	8.3	0.0	66.7	33.3	0.0
Glasses, Lenses, Frames and Spectacles	701510	95.8	4.2	0.0	95.2	4.8	0.0
	900130	95.1	4.9	0.0	85.7	14.3	0.0
	900140	57.6	42.4	0.0	81.0	19.0	0.0
	900150	55.6	44.4	0.0	71.4	28.6	0.0
	900311	96.5	3.5	0.0	95.2	4.8	0.0
	900319	84.7	15.3	0.0	61.9	38.1	0.0
	900390	92.4	7.6	0.0	90.5	9.5	0.0
	900490	23.6	74.3	2.1	23.8	71.4	4.8
Orthotics and Prosthetics	902110	56.9	36.8	6.3	57.1	33.3	9.5
	902131	96.5	2.8	0.7	95.2	0.0	4.8
	902139	60.4	34.7	4.9	76.2	14.3	9.5
Hearing aids	902140	99.3	0.7	0.0	100.0	0.0	0.0
Others	902190	57.6	39.6	2.8	66.7	33.3	0.0

Note: Data for Russia are from 2021. Source: APEC PSU analysis based on data from WITS (TRAINS).

Table A.4. Percentage of economies with MFN tariffs set at zero, and tariff range for rates not set at zero, for each product code in 2022 (%)

Family name	Product code	World		APEC	
		MFN Tariffs bounded at 0%	MFN Tariffs Range	MFN Tariffs bounded at 0%	MFN Tariffs Range
Wheelchairs	871310	81.3	1.5–12	76.2	5–6
	871390	82.6	1.5–10	76.2	3–6
	871420	78.5	1.5–25	76.2	3–10
Glasses, Lenses, Frames and Spectacles	701510	36.8	0.11–25	57.1	3–15
	900130	34.0	1.0–30	52.4	1–8
	900140	36.1	0.15–25	42.9	2–10
	900150	38.9	0.15–25	52.4	2–10
	900311	24.3	0.52–45	38.1	2.5–12.5
	900319	26.4	0.43–45	42.9	3.3–12.5
	900390	25.0	0.98–45	42.9	2.5–10
	900490	31.3	0.88–30	33.3	2.5–10
	902110	81.3	1–10	71.4	1–6

Orthotics and Prosthetics	902131	79.2	1–10	71.4	1–6
	902139	80.6	1–10	76.2	1–6
Hearing aids	902140	81.3	1.5–10	66.7	3–10
Others	902190	84.0	1.5–10	81.0	5–6

Note: Data from Russia are from 2021. Source: APEC PSU analysis based on data from WITS (TRAINS).