حـــوار أبوظبـــي بين الـدول الآسيويـــة
المرسلـــــة والمستقبلـــــة للعمالـــــة

Abu Dhabi Dialogue among the Asian
Labour-Sending and Receiving Countries

VIRTUAL LABOR MOBILITY IN ABU DHABI DIALOGUE MEMBER STATES

THE WORLD BANK

December 2025

Executive Summary

Virtual labor mobility (VLM) refers to cross-border remote work arrangements in which individuals reside in one country while providing services to a client located in another, without physical migration. These arrangements include both wage employment, under offshore service centers, telecommute arrangements and employers working for an employer on record 'EOR', it also includes self-employment such as freelancers or platform-mediated gig work.

Virtual labor mobility generates significant value for workers, employers, and both sending and receiving countries and complements physical labor mobility. For workers, VLM expands access to international labor markets while allowing individuals to remain in their country of residence. With evidence showing that cross-border workers have a similar skillset in 80 percent of cases, wage arbitrage allows firms to access equally skilled talent at lower effective cost. At the same time, workers benefit from earning wages that exceed domestic alternatives. For sending countries, virtual labor mobility supports higher incomes, local spending, and knowledge transfer while mitigating concerns related to brain drain.

Across the Abu Dhabi Dialogue (ADD), member states participate in virtual labor mobility (VLM) along a spectrum. Several members already function as major suppliers, including Philippines, Bangladesh, and Pakistan, supported by large labor forces and established digital and business process ecosystems. Other members act primarily as demand hubs, including the United Arab Emirates, Saudi Arabia, and Qatar, where large services sectors and strong reliance on externally delivered ICT-enabled services drive demand. A subset of ADD countries increasingly occupies hybrid roles, simultaneously exporting digital services while sourcing complementary functions from abroad, including India, Malaysia, and Indonesia. This diversity reflects differences in occupational structures, skills availability, and service-sector maturity, and creates a strong foundation for ADD cooperation based on complementary strengths.

The ADD region already exhibits good practices that demonstrate the feasibility of scaling virtual labor mobility. For example, India and the Philippines illustrate how sustained investments in digital skills, connectivity, and business process ecosystems can position countries as global suppliers. The United Arab Emirates exemplifies a hub-enabler model, hosting shared-service ecosystems that link regional and global demand with international labor supply.

There remains room for improvement across the VLM ecosystem within ADD. Gaps in internet affordability, quality, and reliability constrain participation in several ADD countries, particularly beyond major urban centers. Unequal access to digital skills and limited alignment between training systems and evolving employer demand limit scale and inclusivity.

Building on existing strengths, the ADD is well positioned to strengthen specific virtual labor mobility corridors, particularly those aligning demand from GCC economies with supply from South and Southeast Asian member states, including India, Pakistan, Bangladesh, and the Philippines. Hybrid corridors among countries such as India, Malaysia, and Indonesia could support two-way exchanges of higher-value digital services. By pairing corridor-based cooperation with targeted investments in infrastructure, skills, and regulatory frameworks, the Abu Dhabi Dialogue can move toward more structured, scalable, and mutually beneficial models of virtual labor mobility.

Contents

0.1. Key Messages

- **Virtual labor mobility (VLM) is an increasingly important complement to physical labor mobility** within the Abu Dhabi Dialogue (ADD), enabled by digital connectivity and the growing tradability of services across borders.
- **ADD member states occupy complementary roles in VLM,** spanning supply of cross-border online work, demand for remote services, and hub-based facilitation. Several members already operate simultaneously on both the supply and demand sides.
- **Participation in VLM is not determined by income level alone**. Instead, it reflects occupational structures, digital skills availability, firm strategies, cost considerations, and geographic and cultural proximity between employers and workers.
- **Infrastructure readiness and digital skills are key enablers**. Reliable electricity, affordable and high-quality internet, and access to relevant digital skills shape countries' ability to scale engagement in cross-border remote work.
- **Digital skills demand is evolving rapidly,** with growing returns to specialized, applied, and AI-complementary skills, and declining demand for routine and easily automated tasks, highlighting the need for continuous skills upgrading.
- **VLM offers inclusive opportunities,** particularly for women, youth, persons with disabilities, and others facing mobility constraints.
- **Regulatory clarity and protection frameworks are essential** to ensure that VLM delivers sustainable and equitable outcomes, including clarity on labor classification, social protection, data protection, and cybersecurity.
- **Significant data gaps remain,** particularly around non-platform remote work, corridor-level dynamics, skills demand, and job quality, highlighting the need for improved measurement and shared evidence generation.
- **The Abu Dhabi Dialogue is well positioned to lead coordinated action on VLM,** including corridor-based pilots, skills partnerships, and shared learning, positioning VLM as a strategic tool for inclusive growth in a digital global economy.
- **Together, ADD member states display complementary strengths across the virtual labor mobility value chain.** While Gulf countries predominantly act as demand hubs, several Colombo Process countries already function as major suppliers of digitally delivered services, with others well-positioned to scale given targeted investments in infrastructure and digital skills. This diversity creates a strong basis for structured ADD cooperation on virtual labor mobility, enabling mutually beneficial outcomes across origin, destination, and intermediary countries.
- **Sustaining existing VLM growth, and expanding it, requires working on all the enablers together.** The report demonstrates how -even pioneers in VLM- need to tackle all the VLM enablers as a package to be able to sustain the established growth.
- **The analysis suggests that virtual labor mobility (VLM) presents a concrete opportunity for ADD member states to complement traditional labor mobility pathways** while addressing labor market mismatches, skills gaps, and demographic pressures. To realize this potential, policy action is needed across several interrelated areas.

1. Introduction

The work landscape has undergone a remarkable transformation over the past decade due to technological change and shifting work norms, prompting a rethinking of labor mobility pathways. Advances in network technologies, reductions in communication costs, and innovations in human resource management have created new opportunities for both employers and employees. One major shift has been the loosening of the traditional constraint of employment being tied to a physical location. The World Development Report 2023 on migration estimates that nearly half of all jobs in high-income OECD countries could eventually be performed remotely (World Bank, 2023a).

This new era, in which firms can hire people remotely not only within their own countries but also across borders, has reinforced the growing importance of digital-led development. In recent years, the digital services sector has become a key driver of economic transformation, showing significant growth in employment and value added across the income spectrum, particularly in emerging markets and developing economies (Nayyar and Davie, 2023). In the East Asia and Pacific region, for example, digitally delivered services have contributed more to aggregate labor productivity growth than manufacturing. It is also the fastest-growing component of international trade and foreign direct investment and has observed substantial increases in employment (World Bank, 2024a).

This paper aims to examine the emerging role of virtual labor mobility as a complement to physical labor mobility within the Abu Dhabi Dialogue. It seeks to assess how cross-border remote work can expand employment opportunities, address labor market mismatches, and support more inclusive and flexible forms of labor mobility across ADD member states. Drawing on available evidence and recent trends, the paper analyzes patterns of supply and demand for virtual labor mobility, reviews enabling factors and constraints and identifies policy-relevant entry points for ADD cooperation. The objective is to inform dialogue among member states and contribute to the development of practical, evidence-based approaches for leveraging virtual labor mobility in support of shared development and labor market objectives.

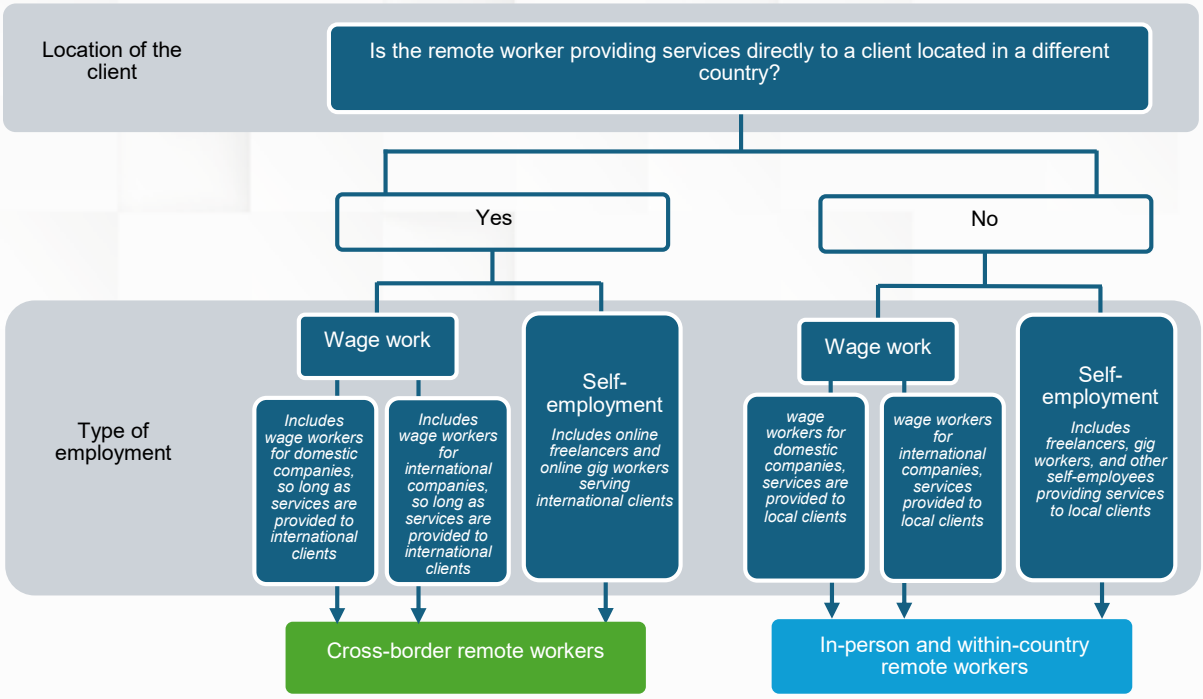
2. Defining Virtual Labor Mobility

Virtual labor mobility refers to cross-border remote work, in which a worker or contractor [1]lives in one country but provides services to a client in another country, either through a domestic or international employer. In this form of work, characterized by its remote nature from the client's perspective, workers typically rely on digital or virtual platforms to perform their service. This type of work has the potential to reduce or even eliminate the need for physical presence in the country where the customer is located, thereby offering an alternative to physical labor migration.

Cross-border remote work can take various forms as long as services are provided to international clients. Cross-border remote workers may be formally employed by a company or operate as self-employed professionals (see Figure 1). For example, it may include graphic designers, data entry focal points, call center agents, or marketing specialists who provide services to clients in other countries, either as wage workers or as self-employed workers. Cross-border remote wage work may also include specialized medical doctors offering radiology interpretation services to cross-border medical practices, employees of a local or multinational company that serve clients abroad of the employees country of residence, or individuals who live in one country while working remotely for a company based in another (such as those employed by tech hubs, offshore service centers, or working full-time from home). The latter aligns with the definition of "telemigrant" introduced in Baldwin (2019). Cross-border remote self-employment includes a wide range of arrangements, from freelancers with long-term engagements with a few clients based abroad to platform-based gig workers handling multiple short-term, task-based contracts for clients in other countries.

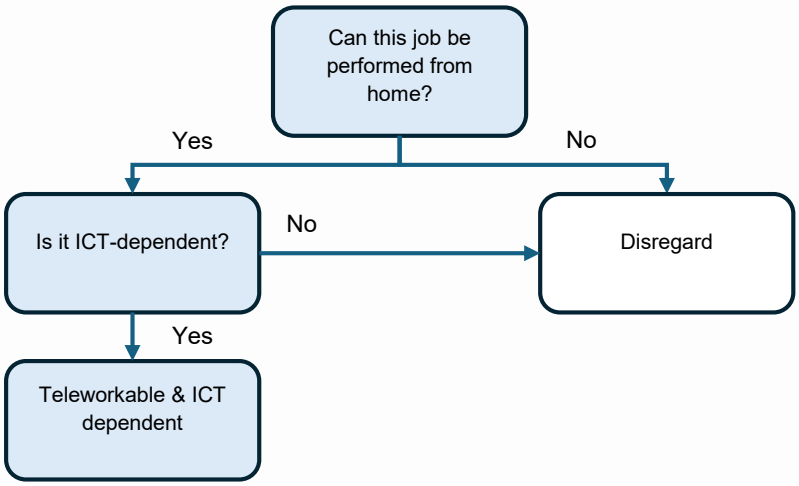
[1] Worker: A person in an employment relationship, characterized by dependency on an employer; a contractor**:** Self-employed, providing services via commercial contract, not employment; Works via digital platforms (apps) for specific tasks, often short-term.

Figure 1. Characterization of cross-border remote workers

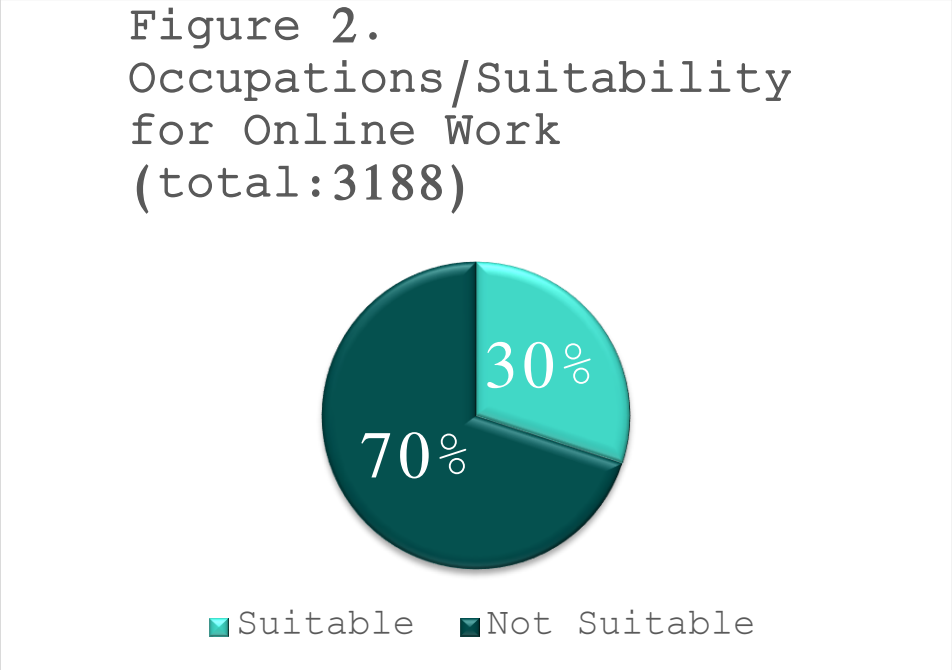


Cross-border remote work is distinct from platform-based gig work, although the two can overlap. Platform-based gig work may be either location-based or online, offering increased employment opportunities and helping to match labor supply and demand both within and across borders. Cross-border remote work, by contrast, refers to wage and self-employed work in which individuals reside in one country and provide services to clients in another country, including work facilitated by online gig platforms. As such, cross-border gig work includes graphic designers and translators providing services to international clients via platforms like Upwork, Fiverr, or TaskRabbit. However, it does not include location-based platform workers, such as Uber or Lyft drivers, who provide transportation or delivery services to clients within the same country.

About 30 percent of occupations can be performed online. Using the ONET Standard Occupational Classification (SOC), it is possible to identify roles that do not include characteristics or tasks requiring in-person presence. The author team classified occupations as teleworkable or non-teleworkable using Dingel and Neiman (2020). Teleworkable occupations are then refined using ONET task data to identify ICT-dependent roles based on the combined importance of computer use and email communication. Occupations that are both teleworkable and ICT-dependent are defined as potential cross-border online jobs.

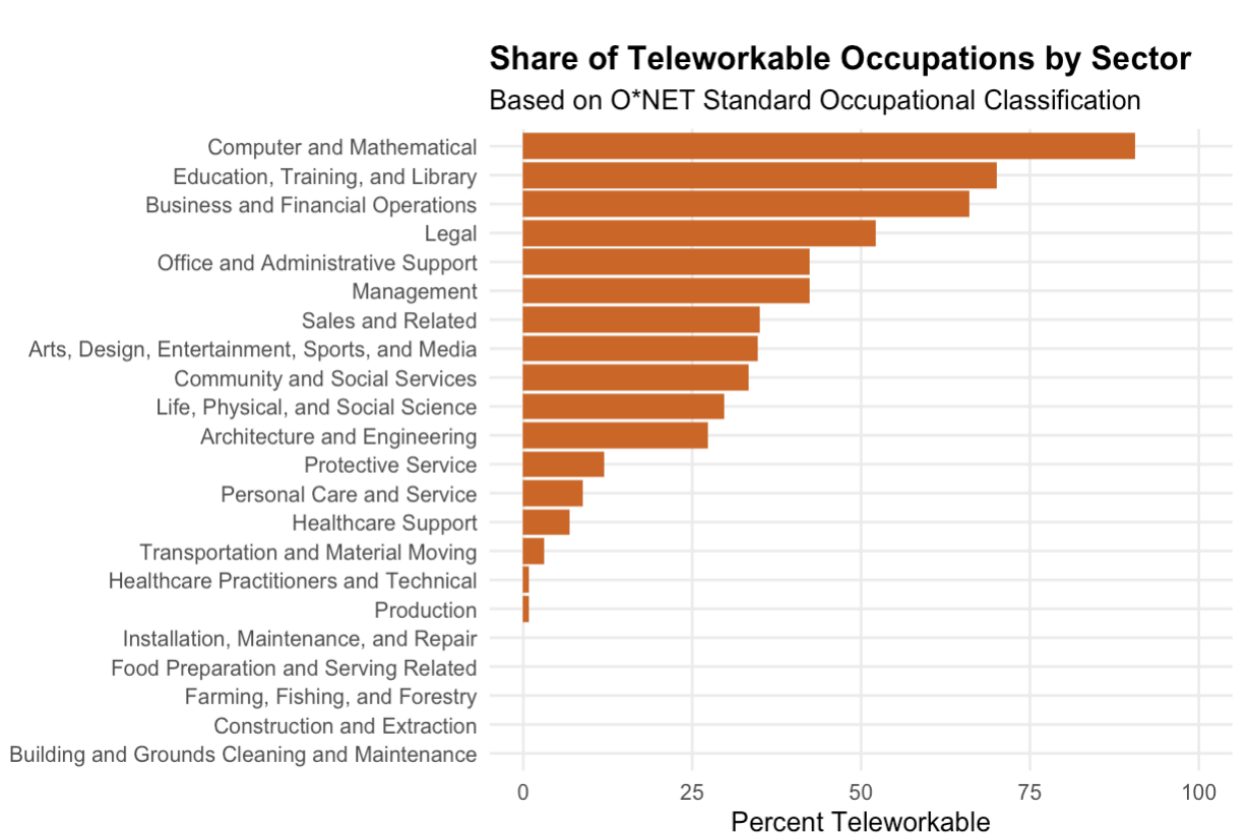


These classifications are mapped from U.S. SOC codes to international ESCO occupations using the official ESCO–ONET crosswalk, to ensure relevance to the international labor markets. Out of 3188 occupations, 30 percent were identified as occupations that are suitable for online work (Figure 2 below).



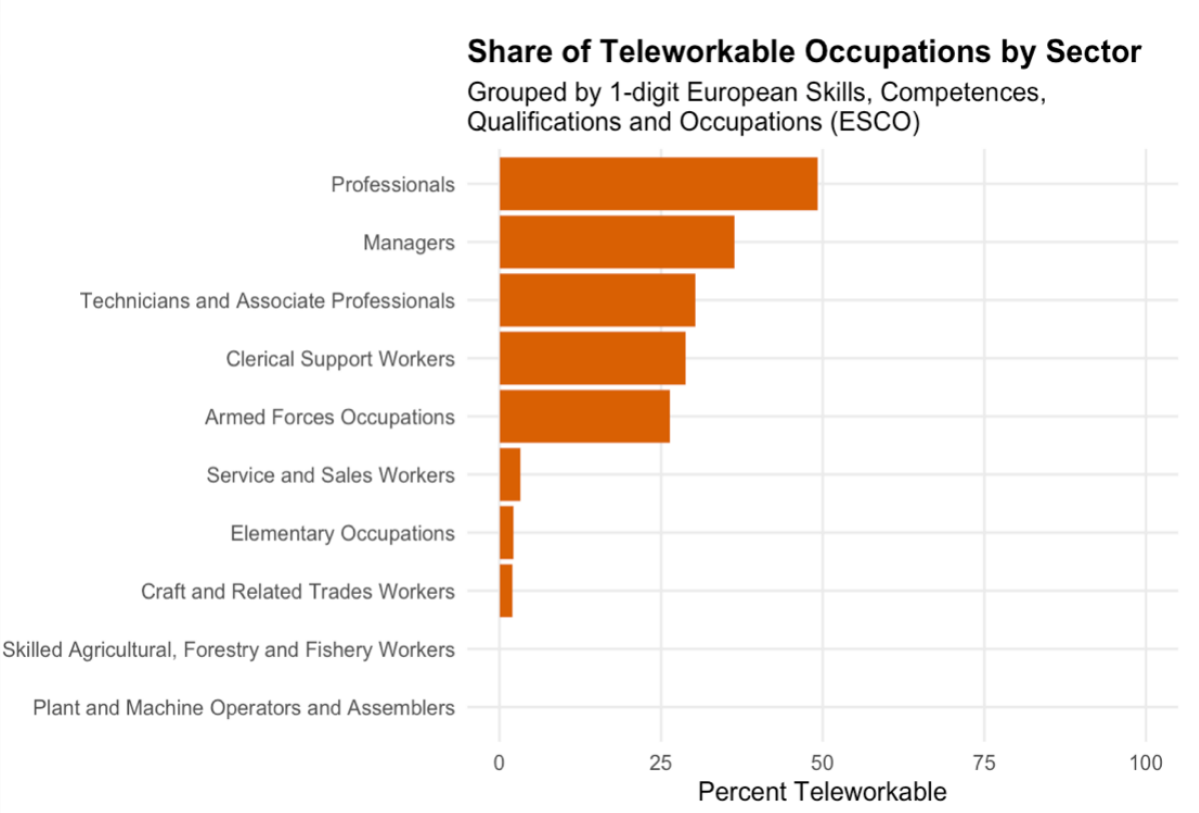
Cross-border occupations and sectors include a wide range of medium and low-skilled jobs. *Figure 3 below illustrates the theoretical distribution of teleworkable occupations by sector, based on* ONET's SOC. Knowledge-intensive sectors, such as Computer and Mathematical Occupations, Education, Training, and Library Occupations, and Business and Financial Operations, have the highest shares of teleworkable roles, reflecting the predominance of tasks centered on computer use, information processing, and communication at a distance.

Figure 3. Share of Teleworkable Occupations by Sector



Occupations classified under Professionals, Managers, and Clerical Support Workers exhibit the highest teleworkability, as these roles tend to involve cognitive, information-based, and administrative tasks that can be performed digitally. Armed Forces and Technicians and Associate Professionals also display moderate potential, reflecting the diversity of tasks within these categories, some requiring presence, others adaptable to remote settings. Figure 4. shows the theoretical share of teleworkable occupations across 1-digit ESCO major groups, providing a broad view of which sectors are most compatible with remote work.

Figure 4. Share of Teleworkable Occupations, grouped by 1-digit ESCO



Occupations centered on administrative, analytical, and knowledge-based tasks exhibit the highest potential for teleworkability, as highlighted by the more granular breakdown across 2-digit ESCO sub-major groups. Clerical workers, teaching professionals, ICT technicians, and business and administration professionals consistently show strong compatibility with remote work, reflecting their reliance on information processing, digital tools, and communication tasks that can be performed at a distance. By contrast, sectors dominated by manual, on-site, or service-intensive activities - including agriculture, craft and related trades, transport, and food services- display very low teleworkability due to their dependence on physical presence, equipment handling, or face-to-face interaction.

2. The Value of Virtual Labor Mobility

Virtual labor mobility offers similar advantages to physical labor mobility and provides additional benefits. Physical labor mobility addresses labor shortages in higher-income, often aging destination countries, while enabling workers from countries of origin to earn higher wages. It also mitigates unemployment, reduces poverty through increased remittances, and fosters knowledge transfers in the origin countries (World Bank, 2023a). Virtual labor mobility can achieve these same benefits in both the origin and the destination countries, while introducing unique advantages inherent to the "cross-border remote modality."

Virtual labor mobility supports individuals who prefer to remain in their current location or who are not planning to relocate soon, often due to family ties and household responsibilities. Survey evidence indicates that while approximately 16 percent of adults globally report a desire to migrate if given the opportunity, only about 5 percent report both the intent and concrete plans to do so, underscoring the limited scale of realized or imminent physical mobility (Gallup, 2023). Complementary evidence from longitudinal data shows that family and community ties are among the primary reasons individuals choose to stay in their current location (Schewel & Fransen, 2020). Within this context, virtual labor mobility provides an additional channel for cross-border labor market integration without requiring immediate physical movement.

Evidence shows that there is not a significant skill gap between the in-person and the remote worker. The skills employers specify in job postings are largely the same for in-person and remote roles, signaling that recruiters expect to fill both with candidates of comparable caliber (Lightcast & Revelio Labs, 2023). This shift has enabled firms to recruit not only technical specialists but also senior and decision-making roles across borders. While overall skill levels are comparable, the composition of demanded skills is shifting rapidly toward specialized and AI-complementary tasks (ILO, 2025).

Differences between remote and non-remote job listings are primarily related to skill emphasis rather than skill level. Analysis of postings for software developers, for example, indicates that remote roles tend to place greater weight on soft skills such as leadership, communication, and collaboration, while non-remote roles more frequently enumerate specific technical requirements (Lightcast & Revelio Labs, 2023). This pattern reflects the coordination demands of distributed work rather than differences in expected productivity or expertise, reinforcing the conclusion that remote work supports access to equally skilled talent while enabling mutually beneficial wage outcomes.

For destination countries, virtual labor mobility provides employers with access to a diverse global talent pool while enabling cost-efficiency gains. The first key advantage is cost efficiency, both in terms of lower wages and mobility costs. For instance, by eliminating the need to sponsor employees' physical relocation expenses can be reduced. Moreover, the ability to adjust compensation based on cost-of-living differences between sending and receiving countries can contribute to a more equitable and sustainable economic model. Virtual labor mobility can also enhance firm resilience, as companies in sectors more conducive to remote work tend to experience less severe impacts from economic shocks (Constantinescu et al., 2024).

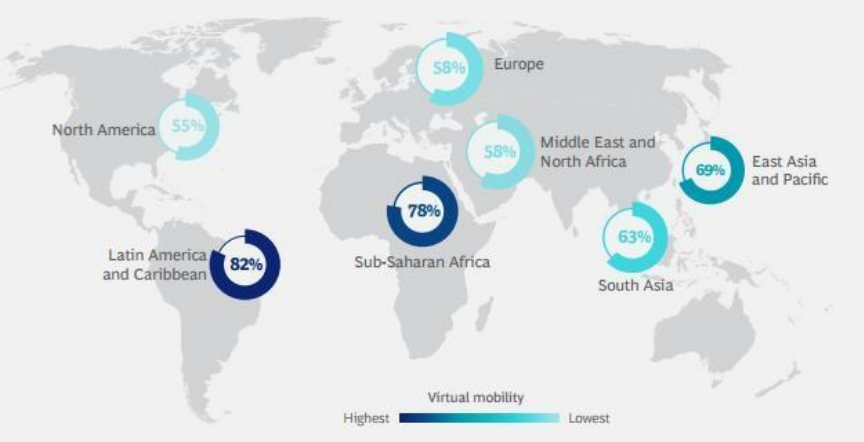
Wage arbitrage contributes to the cost efficiency of the cross-borders modality for employers and the economic gain for the worker. The wage arbitrage (i.e. difference in compensation for the same occupation across countries, adjusted for productivity) allows firms to source talent from lower-wage labor markets while maintaining equivalent skill and performance levels. In the context of remote work, employers can hire workers with comparable capabilities at a lower effective cost because wages reflect local market conditions (Lightcast & Revelio Labs, 2023). At the same time, workers benefit by earning wages above local benchmarks, making wage arbitrage a mutually beneficial mechanism within the global skills marketplace (Lightcast & Revelio Labs, 2023).

For countries of origin, there is a huge opportunity to expand virtual labor mobility for development. Virtual workers not only have the potential to earn higher wages and access better professional opportunities, but they also tend to spend their entire income locally. This increased local demand can generate a multiplier effect on the domestic economy. Such additional demand is essential to jump-start growth and modernize the organization of labor, shifting from self-employment to salaried jobs (Bandiera et al., 2022). Moreover, virtual labor mobility mitigates the costs associated with "brain drain" while fostering cross-border knowledge transfer. Highly skilled individuals who remain in their home country can enhance their human capital through interactions with foreign firms and customers and transfer this knowledge to the domestic economy (Teodorovicz et al., 2024).

Furthermore, virtual labor mobility can serve as a steppingstone to physical migration. This can be accomplished by enabling employers and workers to establish employment relationships, demonstrate skills and work readiness, and accumulate verifiable work experience prior to relocation, thereby informing and facilitating subsequent migration decisions.

Interest in virtual labor mobility is already on the rise, particularly among workers in less-developed economies. The interest in working for a foreign employer without a physical presence in the country grew from 57 percent in 2020 to 66 percent in 2023 among workers across 188 countries (BCG, 2024). The largest interest in finding a virtual mobility opportunity is observed among workers in sub-Saharan Africa and Latin America and the Caribbean (see Figure 5).

Figure 5. Interest in virtual mobility by region, 2023



Source: BCG (2024).

Virtual labor mobility can specifically benefit immobile vulnerable groups that can gain access to better job opportunities in their countries of origin. The World Development Report 2016 Digital Dividends highlights that online work can be especially advantageous for women, youth, older workers, and people with disabilities, as it offers the flexibility of working from home or choosing flexible hours (World Bank, 2016). This includes individuals in conflict zones, women excluded from the labor market due to transportation constraints or significant mobility barriers, people with disabilities who face physical accessibility challenges in traditional workspaces, and refugees who lack fluency in the local language of their host communities, among others.

Moreover, virtual labor mobility holds potential for expanding opportunities among individuals at the bottom of the skill distribution. While current trends suggest that highly skilled workers benefit the most from virtual labor mobility (Garrote Sanchez et al., 2021; Gottlieb et al., 2021; Hatayama, Viollaz, and Winkler, 2023), future initiatives could focus on education and skill development. Such efforts would enable low- and semi-skilled workers to participate more fully in the global digital economy.

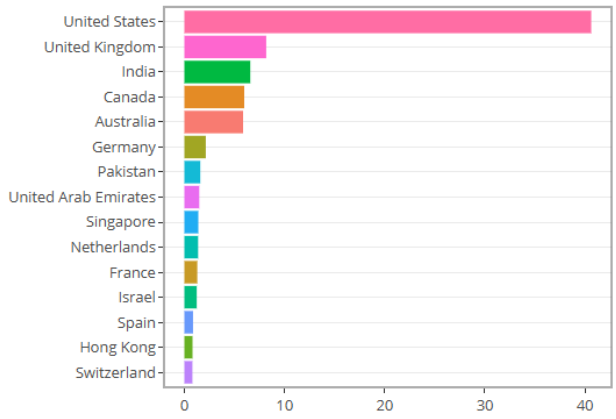
2. The Demand and Supply for Virtual Labor Mobility

To translate the potential value of virtual labor mobility into actionable policy insights for ADD member states, it is essential to examine where demand for remote services originates and where supply is emerging. This section, therefore, draws on multiple data sources to examine demand and supply patterns in virtual labor mobility. Platform-based data is used to capture the geographic distribution of cross-border online work. To complement this, trade-based proxy indicators from the World Development Indicators (WDI) are employed to assess ADD countries' participation in digitally delivered services beyond platforms, including firm-level outsourcing and ICT-enabled services. This is then complemented with evidence on regional pairing in remote hiring is then used to.

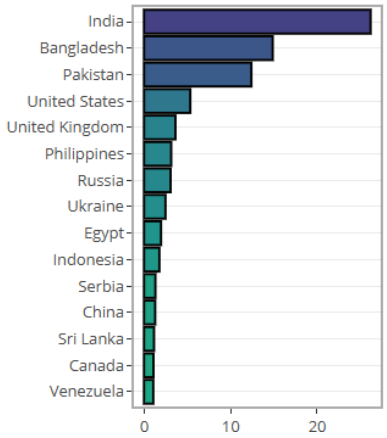
Various countries of ADD members are amongst the major countries for supply and demand of online work using digital labor platforms. According to the Online Labor Observatory, a joint effort by the International Labor Organization (ILO) and the University of Oxford, the highest demand for online work originates from the United States, followed by the United Kingdom, India, Canada, and Australia, with UAE also being amongst the top 15, while the largest supply comes from India, Bangladesh, and Pakistan. Other ADD members on the supply side include Philippines, Indonesia, China and Sri Lanka. (Figure 6). However, it is important to highlight that the list below is structured based on online digital labor platforms, thus excluding Business Process Outsourcing for online jobs.

Figure 6. Share of online labor demand and supply, top 15 countries

Panel (a) Demand



Panel (b) Supply



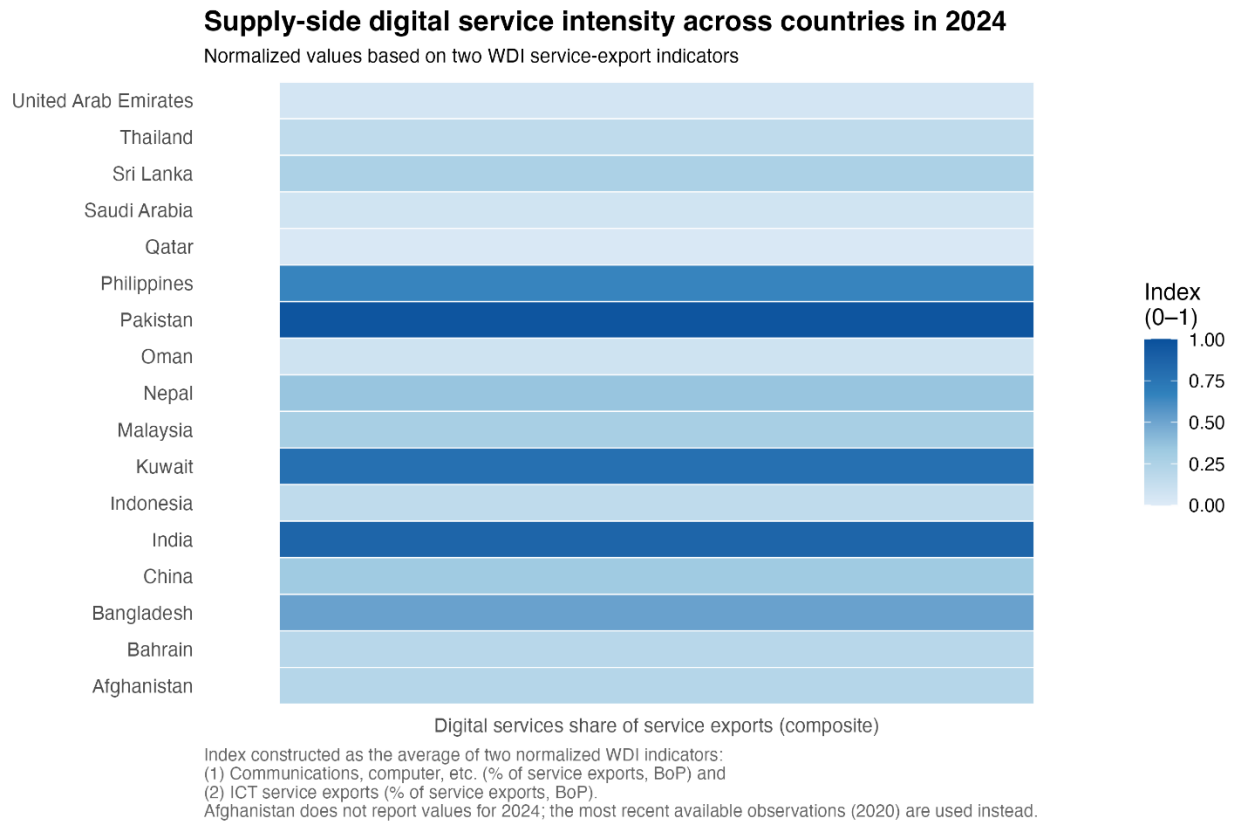
Source: ILO (2025a).

Selected World Development Indicators (WDI) were used as proxies to assess which ADD member states play a role in supplying or demanding digitally delivered services, including BPOs, call centers, and other online business services. The WDIs were used to construct proxy measures of ADD countries participating in VLM on both the supply and demand sides. The analysis uses WDI indicators to construct proxy measures of countries' participation in cross-border digital services markets on both the supply and demand sides. For each side, two WDI indicators are selected focusing specifically on ICT-enabled and digitally deliverable services. Indicator values are first aggregated across recent years then normalized using percentile ranks (0–1) to ensure comparability across countries.

Supply-side digital service intensity is proxied using two export-oriented WDI indicators: (i) communications, computer, and other services as a share of total service exports, and (ii) ICT service exports as a share of service exports (BoP). Together, these indicators capture both the breadth and ICT intensity of a country's service export basket, providing evidence that domestic firms and workers are delivering digitally enabled services to foreign markets. High normalized values indicate countries where service exports are structurally oriented toward ICT-enabled activities commonly associated with BPOs, shared service centers, and remote professional services.

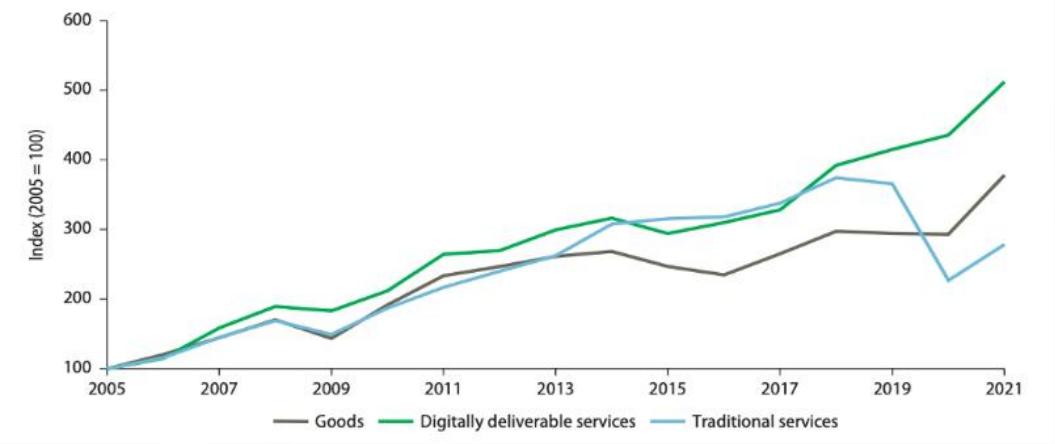
The analysis highlights strong supply-side intensity in countries such as India, Pakistan, Bangladesh, and the Philippines, consistent with World Bank and ILO evidence documenting their established roles in global outsourcing and offshore services value chains. India and the Philippines, in particular, are repeatedly identified in World Bank trade and jobs diagnostics as major exporters of ICT-enabled services, supported by large service-sector labor forces and long-standing BPO ecosystems. Pakistan and Bangladesh show high relative specialization despite smaller absolute export volumes, reflecting emerging but rapidly growing digital service export bases. By contrast, GCC countries such as Saudi Arabia, Qatar, and the UAE display low supply-side intensity, indicating that their service export structures remain dominated by non-ICT activities, even where digital infrastructure is strong. This reflects limited export orientation of ICT-enabled services, rather than the absence of domestic outsourcing, shared service, service intermediation or hub-based service delivery ecosystems within these economies. Figure 7. below shows the Supply-focused members within ADD.

Figure 7. Supply-focused members within Abu Dhabi Dialogue



Trade in digitally delivered services across East Asia and Pacific (EAP) countries, including some ADD member states, has grown faster than traditional services. As shown in Figure 14, Digitally deliverable services - defined as an aggregation of insurance and pension services, financial services, charges for the use of intellectual property, telecommunications, computer and information services, other business services, and audiovisual and related services – are rapidly growing in the EAP region, in comparison with both goods and traditional services. The figure includes Cambodia, China, Fiji, Indonesia, Kiribati, Malaysia, Mongolia, Papua New Guinea, the Philippines, the Solomon Islands, Thailand, Tonga, Vanuatu, and Vietnam. Trade is defined as the sum of imports and exports.

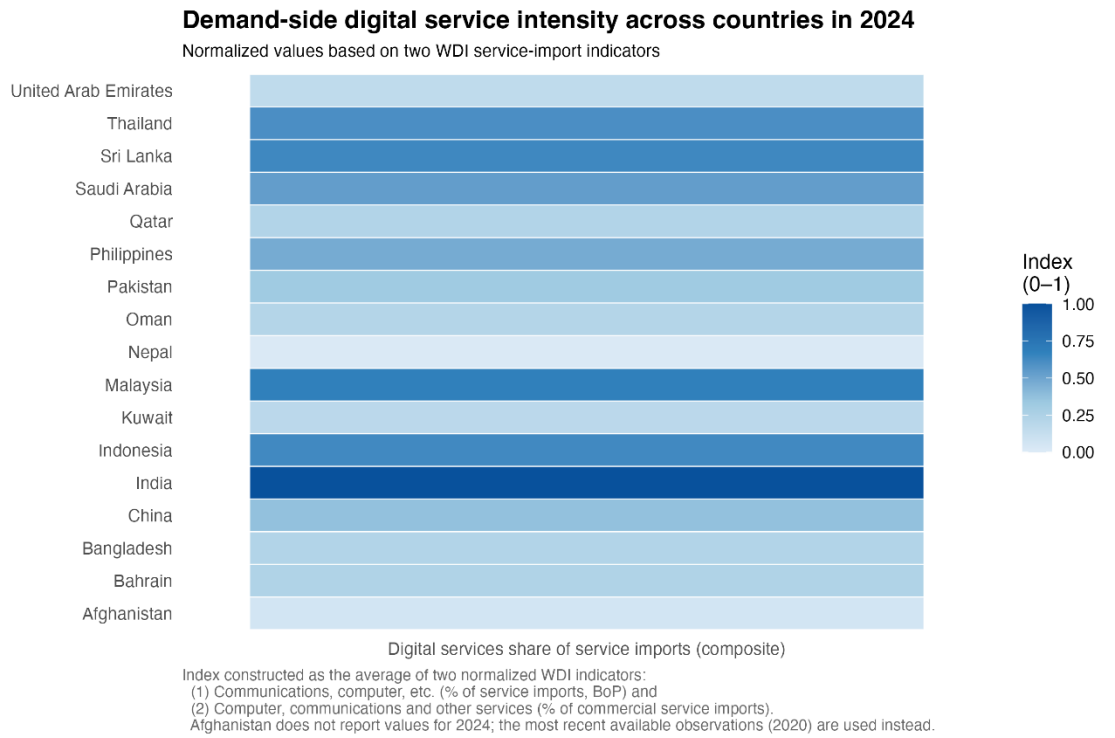
Figure 14. Trade in services, selected countries, 2005-21



Source: World Bank (2024a).

Demand-side digital service intensity is proxied using two import-oriented WDI indicators: (i) communications, computer, and other services as a share of service imports (BoP), and (ii) computer, communications, and other services as a share of commercial service imports. These indicators capture the extent to which domestic firms and institutions rely on foreign-supplied digital and ICT-enabled services, isolating outsourcing demand from other service imports such as travel or transport. Higher normalized values reflect greater dependence on externally sourced digital services and, by extension, stronger demand for cross-border online work. Figure 8

Figure 8. Demand-focused members within Abu Dhabi Dialogue



The analysis shows that India, Malaysia, Indonesia, Thailand, and Saudi Arabia exhibit relatively high demand-side intensity, indicating substantial imports of ICT-enabled services alongside domestic digital activity. In the case of GCC economies as Saudi Arabia, the UAE, and Qatar, this pattern suggests utilizing foreign firms and offshore service providers to meet digital and back-office needs. Countries such as India and Malaysia display high values on both the supply and demand sides, reinforcing their characterization as hybrid economies that simultaneously export digital services while outsourcing complementary or higher-value functions abroad.

Globally, Job matchings between developed and developing economies shows a strong preference for regional pairings, reflecting cultural, language, and geographic factors which extend beyond worker skills. Between 2020 and 2023, pairings between North American firms and workers in Central America and the Caribbean grew by over 300 percent. Similarly, Southern European firms paired with workers in Sub-Saharan Africa increased by 200 percent, and Southern Asian firms with workers in Eastern Asia rose by 100 percent (Figure 9). This trend in regional pairings suggests that firms are not only seeking skill compatibility but also aiming to reduce the "distance" factors that affect collaboration between firms and workers, such as time zone (geographic) and language (cultural).

Figure 9. Region Pairs with Highest Increase in Remote Workers, 2020 to 2023

Source: Lightcast and Revelio Labs (2023).

Building on these regional trends, new evidence points to Africa's growing role as a hub for remote digital work. A 2025 *Future of Remote Work in Africa* report finds that nearly 62 percent of surveyed international firms, primarily from the United States, United Kingdom, and Europe, are already hiring full-time remote workers from the continent, particularly in technology and finance (Rayda, 2025).

Evidence from global job postings suggests that there is no direct or linear relationship between a country's income level and the share of remote or teleworkable jobs advertised. Instead, observed patterns are driven by differences in occupational structures, employer hiring strategies, cost considerations, and geographic proximity, rather than income per capita alone (Lightcast & Revelio Labs, 2023).

While the set of occupations that can be performed remotely is broadly universal, demand for cross-border remote services is shaped by country- and region-specific factors that give rise to distinct outsourcing "hotspots." These hot spots are influenced by economic structure and sectoral demand, geographic proximity and time-zone compatibility, cultural and linguistic alignment, and relative labor costs. Evidence from global remote hiring patterns shows that firms tend to prioritize regions that minimize coordination frictions while offering cost efficiencies, leading to persistent regional pairings rather than globally dispersed hiring.

4. Supply- and demand-side participation in virtual labor mobility across ADD member states

Across the Abu Dhabi Dialogue (ADD), participation in virtual labor mobility (VLM) is best understood as a continuum rather than a binary division. ADD member states include countries that already function as major suppliers of cross-border online work, countries that primarily act as demand hubs for outsourced and remotely delivered services, and a smaller group that increasingly operate on both sides of the market. This diversity reflects differences in labor market structures, digital skills availability, service-sector maturity, and firm demand for cost-efficient and scalable service delivery (Stephany et al., 2021; Lightcast & Revelio Labs, 2023).

Several ADD member states are already well integrated into global online labor markets and digitally delivered services as suppliers. India, Bangladesh, and Pakistan rank among the largest sources of online labor supply worldwide, particularly in platform-mediated freelance work, clerical and data-related tasks, IT services, and other digitally deliverable occupations. Evidence from the Online Labour Index shows that online labor supply is highly concentrated in a small number of countries, with South and Southeast Asian economies playing a dominant role (Stephany et al., 2021).

The Philippines occupies a distinctive position among ADD member states, combining a long-established role in business process outsourcing (BPO) and IT-enabled services with increasing participation in higher-value digital and remote services. Recent reporting highlights continued growth in the Philippine IT-BPM sector, driven largely by external demand and accompanied by policy and industry efforts to shift toward more advanced digital, technical, and AI-adjacent functions (Reuters, 2024).

Other ADD member states, notably Vietnam, are increasingly visible as emerging suppliers of digitally delivered services and remote work, reflecting expanding ICT talent pools and deeper integration into global services value chains. At the same time, countries such as Indonesia, Sri Lanka, and Nepal show meaningful potential to scale their supply-side participation further. While their current representation in global online labor markets remains more limited, existing human capital and improving digital connectivity suggest scope for targeted investments to expand their role as suppliers of cross-border online work (Stephany et al., 2021).

On the demand side, GCC ADD member states, particularly the United Arab Emirates and Saudi Arabia, function as regional demand centers for outsourced and remotely delivered services. This role is driven by large and growing services sectors, high domestic labor costs, and private-sector demand for flexible and scalable service delivery models. In Saudi Arabia, for example, market research points to rapid growth in the domestic outsourcing and BPO market, reflecting both rising demand for outsourced processes and the expansion of local service delivery ecosystems (Grand View Research, 2024).

The United Arab Emirates also illustrates a distinct hub-enabler role within ADD. The country hosts specialized business ecosystems designed to cluster outsourcing and shared-service providers, supported by dedicated infrastructure and regulatory facilitation. Dubai Outsource City, established in 2007, is one such example, providing a physical and regulatory environment for firms delivering outsourced and digitally enabled services across borders (UAE Ministry of Economy and Tourism, 2024). These hub models reduce transaction costs for firms and can serve as intermediaries linking global demand with regional labor supply.

The United Arab Emirates has developed a large and growing market for outsourced and digitally delivered services, positioning it as a key demand-side economy for cross-border online work. Total spending by UAE-based organizations on outsourcing services exceeded USD 4.8 billion in 2018 and has continued to expand, reflecting strong demand from a diversified services sector and the UAE's role as a regional business and headquarters hub. Local outsourcing providers account for a meaningful share of this market, while international and regional providers play an important complementary role, enabling firms to scale access to specialized skills and digital capabilities (Forward MENA, 2023).

Demand for cross-border online work in the UAE spans customer support, finance and accounting, human resources, IT support, and knowledge-intensive services, with delivery occurring through a mix of company back offices, independent service providers, and freelancers. While captive back offices remain relevant for selected functions, third-party providers and platform-based freelancers are widely used, particularly for IT services, digital marketing, design, and emerging technical clusters such as infrastructure management. Typical sourcing patterns include India and neighboring Arab countries for standardized business process services, alongside providers in Europe and North America for more advanced digital functions.

Saudi Arabia is considered the second most attractive destination for outsourcing providers in the GCC, reflecting strong and rapidly growing demand for externally delivered digital and business services. While the local supply of outsourcing services was estimated at around USD 1 billion in 2018, overall demand reached approximately USD 2.3 billion and is projected to grow at a compound annual growth rate of about 10 percent, reaching USD 5.7 billion by 2027. This persistent gap between domestic supply and demand positions Saudi Arabia as a net demand-side economy for cross-border online work, particularly as firms seek scalable access to ICT-enabled services to support economic diversification and large-scale transformation initiatives (Forward MENA, 2023).

Third -party outsourcing -especially information technology outsourcing (ITO) - is common, including in emerging clusters such as infrastructure management services and engineering design. Firm-level examples include STC outsourcing HR services to Aegis in India and Mobily outsourcing IT services to IBM, with simpler business process outsourcing typically sourced from India and Egypt, and more advanced ITO services provided by firms in the United States, India, Japan, and France. These patterns underscore Saudi Arabia's role as a major demand anchor for cross-border online work, with clear relevance for developing virtual labor mobility corridors.

Qatar has developed a strong and expanding market for outsourced and digitally delivered services, positioning it as a demand-side economy for cross-border online work within the GCC. Local supply of outsourcing services is estimated at approximately USD 420 million, while spending on business process outsourcing reached around USD 220 million in 2021, complemented by a managed services market—often used as a proxy for IT outsourcing—estimated at USD 467 million. Total demand for outsourced services is expected to grow steadily, reaching approximately USD 871 million by 2027, reflecting sustained economic growth and increasing reliance on externally delivered digital services (Forward MENA, 2023).

Demand for cross-border online work in Qatar is concentrated in IT services, business process outsourcing, and knowledge-intensive functions, driven by national digital initiatives and rapid technology adoption across the economy. The Smart Qatar (TASMU) program and Qatar National Vision 2030 are expected to accelerate demand for advanced digital capabilities, including data analytics, cloud computing, cybersecurity, software development, artificial intelligence, and creative and design services. While Qatar has developed a meaningful local outsourcing base, firms continue to engage international service providers to access specialized skills and flexible delivery models, reinforcing Qatar's role as a high-value demand hub for cross-border online work and virtual labor mobility.

Importantly, some ADD member states operate simultaneously on the supply and demand sides of virtual labor mobility. India is an example of this dual role, combining its position as one of the world's largest suppliers of online labor with growing outbound demand for digital and professional services sourced internationally (Stephany et al., 2021). Saudi Arabia similarly exhibits a dual role: while it increasingly sources remote and outsourced services from lower-cost international locations, it is also developing domestic outsourcing capacity to serve national and regional markets (Grand View Research, 2024). Malaysia can also be characterized as a dual-role country within ADD, participating in digitally delivered services both as a recipient of offshore investment and as a supplier within selected segments of the digital economy.

Taken together, the diversity of supply, demand, and hub-oriented roles across ADD member states creates a strong foundation for corridor-based cooperation on virtual labor mobility. Rather than viewing VLM solely through a global lens, ADD countries are well positioned to leverage complementary strengths, by aligning demand from Gulf economies with supply from Asian member states, supported by regional hubs, skills partnerships, and coordinated approaches to regulation and worker protection. Evidence from global remote work patterns further suggests that regional pairing -shaped by time-zone alignment, cultural proximity, and business familiarity- can be deliberately strengthened within the ADD framework to maximize mutual benefits (Lightcast & Revelio Labs, 2023). These complementary roles lend themselves naturally to structured 'virtual corridors', discussed later in the section, that align GCC demand with Asian supply under the ADD framework.

Building on the WDI analysis and the global trend of regional pairing, several 'virtual corridors' can be strengthened between the ADD member states:

- **India / Pakistan / Bangladesh TO Gulf Cooperation Council (GCC) economies:** South Asian economies show strong supply-side digital service intensity, consistent with established BPO, IT, and remote service ecosystems documented in World Bank trade and jobs diagnostics. GCC economies, by contrast, display relatively low supply but comparatively high demand for imported ICT-enabled services, reflecting outsourcing by both private firms and public entities. Virtual corridors in this pairing could support remote delivery of business services, customer support, software development, and back-office functions, complementing existing physical labor mobility arrangements within the Abu Dhabi Dialogue.
- **Philippines to GCC and Malysia:** The Philippines' strong specialization in communications and computer services aligns with its well-documented role as a global call-center and BPO hub (World Bank; ILO). Pairing with demand-intensive Gulf economies or with Malaysia, where firms increasingly import digital services, could expand higher-value remote service provision beyond traditional voice-based BPO.
- **India to and from Malaysia/Thailand/Indonesia** (hybrid/hybrid corridors) Countries such as India, Malaysia, and Indonesia show relatively high intensity on both supply and demand indicators, suggesting scope for two-way digital service exchange. Corridors among these economies could support more complex forms of virtual labor mobility, including project-based professional services.

3. Pillars and Constraints of Virtual Labor Mobility

Effective implementation of virtual labor mobility initiatives relies on a set of requirements, constraints, and enablers. These include infrastructure, human capital factors, and regulatory frameworks as workers need access to the internet, access to internet-enabled devices, digital literacy, and institutions and laws that allow them to benefit from this model.

Requirements, constraints, and enablers should be assessed objectively on a case-by-case basis. Governments in countries of origin hope to attract offshore services by virtue of the availability of educated human capital, inexpensive labor, and good telecommunications infrastructure their countries can provide. For a successful offshoring case, and more generally in virtual labor mobility, these virtues should be objectively assessed and enhanced for a successful match between the countries of origin and the countries of destination. As a rule of thumb, anything that makes it easier to telework domestically tends to facilitate virtual labor mobility (Baldwin et al., 2021).

Box 1. Policy Lessons from the 'Opportunities Without Borders' Pilot for Virtual Labor Mobility

The *Opportunities Without Borders* pilot, implemented by **Na'amal NGO** under the **World Bank's Innovation Challenge on Jobs and Migration**, provides actionable evidence on what it takes to enable participation in cross-border online work. Evaluated through a randomized controlled trial (RCT) in Kenya and East Africa, the pilot covered 2,000 participants (1,400 treatment and 600 control), primarily refugees and host-community members with limited access to formal labor markets. The intervention combined soft-skills training, intensive freelance training, and structured mentorship, aiming to prepare participants for online and platform-based work.

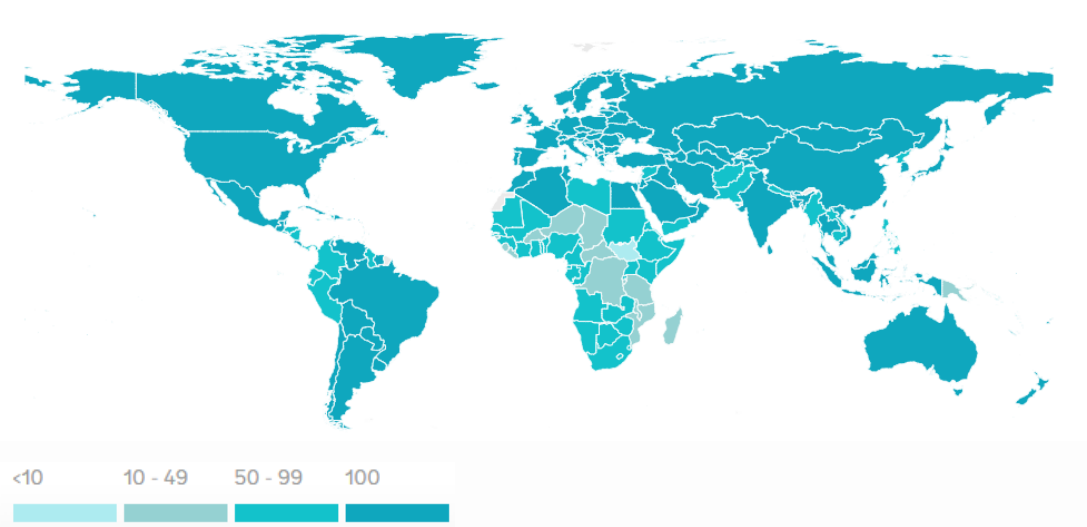
The results point to three key policy lessons. First, skills training can effectively raise early-stage readiness for online work - improving platform literacy, portfolio development, and confidence- but does not automatically translate into sustained employment. The evaluation identified a persistent "conversion gap", whereby readiness improved faster than access to contracts. Second, sustained participation in cross-border online work depends on demand-side and ecosystem conditions, including employer awareness, access to contracts, competition dynamics, and platform intermediation, rather than training alone. Third, a subset of participants did successfully convert skills into paid work, suggesting that targeted support combined with real demand linkages can be effective when ecosystem barriers are addressed.

These findings have direct implications for virtual labor mobility strategies. They suggest that supply-side interventions, such as training and skilling programs, should be paired with demand-side engagement, including firm outreach, structured sourcing arrangements, and the development of cross-border service corridors linking demand economies (e.g. GCC countries) with qualified workers in supply economies. In this context, virtual labor mobility policies that align training with identified demand clusters, facilitate access to contracts, and reduce frictions in cross-border service delivery are more

4.1 Infrastructure

The first prerequisite to virtual labor mobility is infrastructure adequacy in the country of origin. The country of origin must have consistent access to electricity and reliable and high-speed internet access to support virtual labor mobility, specifically for occupations that require continuous access to centralized systems (e.g. call center agents who are reviewing the callers' profiles and track records to provide timely answers). As of 2023, access to electricity has shown a positive trend, with nearly 92 percent of the world's population now connected (IEA et al., 2025). However, significant gaps remain in this area: 85 percent of those without access live in Sub-Saharan Africa and 84 percent reside in rural areas (Figure 10). Closing these energy gaps is critical for the effective implementation of cross-border remote work initiatives. The World Bank's mission 300 is one step toward the goal of achieving universal energy access.

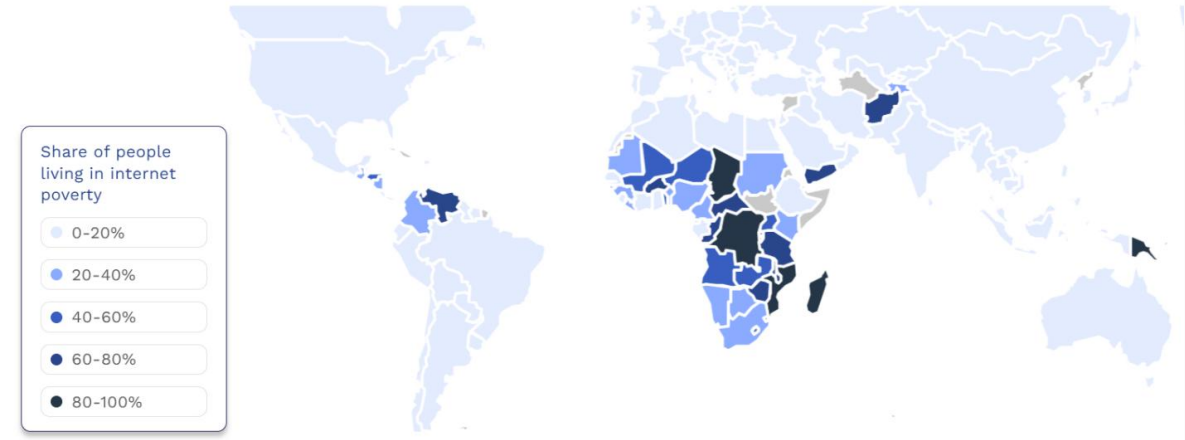
Figure 10. Electricity access rate, % of population



Source: IEA et al. (2025).

Another key prerequisite for virtual labor mobility is internet access. However, global internet penetration remains significantly lower than electricity access. By 2024, 68 percent of the world's population was using the internet, with considerable heterogeneity across countries. Internet usage exceeds 90 percent in High-Income Countries but falls to 54 percent in Lower-Middle-Income Countries and just 27 percent in Low-Income Countries (World Bank, 2025a). Estimates of internet poverty, a measure of the share of people unable to afford a minimum package of mobile internet, also reveal stark disparities (World Data Lab, 2025).

Figure 11. Internet poverty, % of population



Source: World Data Lab (2025).

Virtual workers must also have access to appropriate technical equipment. This includes computers, specialized software, headsets, and other essential tools to perform their tasks effectively. Access to local tech hubs is equally important for roles that require centralized operations, such as call centers.

Digital payment options are also essential for virtual labor mobility. Employers will only be willing to engage with virtual workers if the system does not impose additional costs or mechanisms beyond those already set in place for in-country remote or in-person work.

Adequate digital and physical infrastructure constitutes a foundational precondition for the effective participation of ADD member states in virtual labor mobility, particularly for occupations that require continuous system access, real-time communication, or secure data handling. Table 1 summarizes infrastructure readiness across ADD member states.

While global access to electricity and the internet has improved substantially over the past decade, significant disparities persist across and within ADD member states, reflecting differences in income levels, urban–rural divides, and investment trajectories (World Bank, 2025; IEA et al., 2025). These disparities shape countries' current and potential roles in virtual labor mobility, influencing whether they can function as suppliers of cross-border online work, demand hubs for remote services, or both. The table below shows the 'readiness' to implement VLM; however, it's important to note that, even in countries with low readiness level, detailed assessments can be applied to identify areas with higher readiness, thus targeting investments to underserved areas.

Table1. infrastructure readiness across ADD member states.

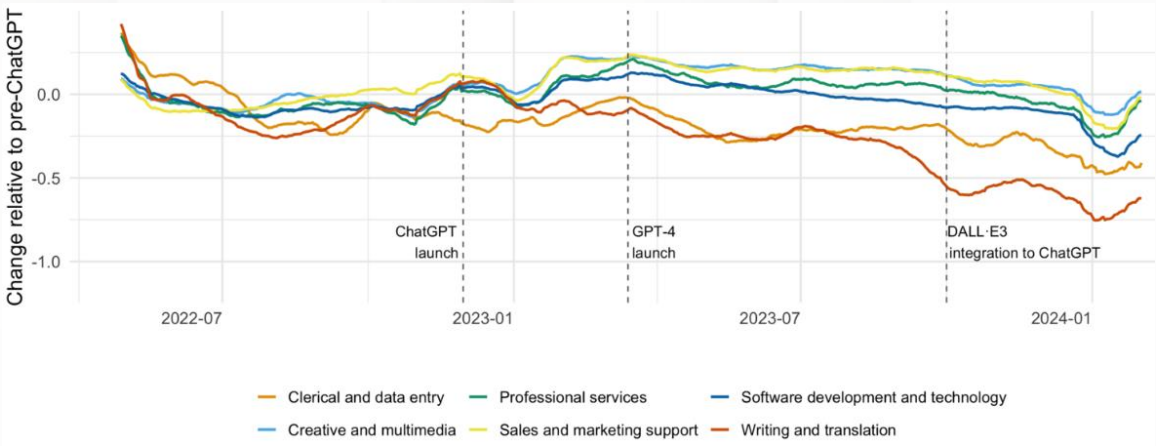
ADD Member State	*Electricity Access, % of population*	*Individuals using the Internet, % of population*	*Infrastructure Readiness to Implement VLM*
Afghanistan	85.3	18	Low to moderate readiness
Bahrain	100	100	High readiness
Bangladesh	99.5	45	Low to moderate readiness
India	99.5	56	Moderate readiness
Indonesia	99.4	69	Moderate readiness
Kuwait	100	100	High readiness
Malaysia	100	98	High readiness
Nepal	94	56	Low to moderate readiness
Pakistan	95.6	27	Low to moderate readiness
Philippines	98	84	High readiness
Qatar	100	100	High readiness
Saudi Arabia	100	100	High readiness
Sri Lanka	100	51	Moderate readiness
United Arab Emirates	100	100	High readiness
Viet Nam	99.8	78	Moderate readiness

4.1 Digital Skills

Human capital is another enabler -and potential barrier- to cross-border remote work. To benefit from the gains of cross-border remote work, workers must acquire both occupation-specific and technological skills. Despite a large potential workforce, virtual labor mobility remains constrained by unequal access to digital skills and technology. Data from LinkedIn shows that skill penetration is strongly correlated with a country's income level and urban concentration (World Bank & LinkedIn, 2018). In lower-income countries, many individuals in remote-compatible occupations still lack access to the necessary technology and training to work online, limiting their ability to engage in the global online labor market.

The rapid transformation of digital work, driven by advances in generative artificial intelligence, requires continuous adaptation in skill development strategies. Recent studies on freelancer demand following the launch of ChatGPT reveal a growing preference for specialized expertise. Demand has increased for manual-intensive skills and those that complement or remain unaffected by artificial intelligence, while it has decreased for skills prone to automation or easily substituted by artificial intelligence (Demirci et al., 2025; Teutloff et al., 2025). Notably, the most significant drops in labor demand compared to the pre ChatGPT period have occurred in writing and translation and clerical and data entry work (Figure 12). As generative artificial intelligence continues to evolve, it will further reshape the digital labor market by redefining the tasks and sectors that benefit from the high cross-border demand. This ongoing transformation will require workers to continuously adjust and update their skills to remain competitive in the digital economy.

Figure 12. Change in online labor demand by job category



Source: ILO (2025b).

Among ADD member states, a subset already functions as established suppliers of digitally delivered services, supported by relatively deep pools of task-based and professional digital skills. Countries such as India, Bangladesh, Pakistan, and the Philippines account for a significant share of global online labor supply, particularly in freelance, clerical, IT-enabled, and platform-mediated work (Stephany et al., 2021). While formal tertiary education attainment varies across these countries, many workers possess practical digital competencies aligned with global demand, including software development, data-related tasks, digital marketing, customer support, and back-office services. The Philippines, in particular, has leveraged long-standing investments in business process outsourcing and IT-enabled services to develop a workforce with strong language, communication, and service delivery skills, increasingly complemented by more advanced digital and technical capabilities.

Other ADD member states, including Vietnam, are emerging as growing suppliers of digital and remote services, reflecting expanding ICT education pipelines and increasing integration into global services value chains. At the same time, countries such as Indonesia, Sri Lanka, and Nepal exhibit substantial untapped potential on the supply side. Although their current participation in global online labor markets remains more limited, available evidence suggests that constraints are less related to the absence of foundational skills and more to gaps in digital infrastructure, access to training, and market linkages (Stephany et al., 2021). Targeted investments in digital skills development, particularly in occupation-relevant, modular, and applied training—could enable these countries to scale participation in cross-border online work more rapidly.

The evolving nature of digital work further underscores the importance of continuous skills upgrading. Advances in generative artificial intelligence are reshaping demand in online labor markets, increasing returns to specialized, complementary skills while reducing demand for routine tasks that are more easily automated (ILO, 2025b; Demirci et al., 2025). Evidence from online labor platforms shows declining demand for clerical data entry and basic translation tasks, alongside rising demand for higher-order digital, technical, and problem-solving skills. This trend has direct implications for ADD member states, highlighting the need to move beyond entry-level digital work toward skills that are resilient to automation and aligned with evolving employer demand.

Taken together, the digital skills landscape across ADD member states points to both strong existing comparative advantages and clear areas for policy action. Countries that already supply cross-border online work can benefit from strategies that support upskilling and occupational mobility within the digital economy, enabling workers to transition into higher-value roles. Meanwhile, countries with emerging or latent potential can focus on expanding access to foundational and intermediate digital skills, strengthening linkages between training systems and labor market demand, and reducing barriers to participation in global online labor markets. Coordinated approaches to digital skills development within the ADD framework could therefore play a central role in unlocking more inclusive and sustainable virtual labor mobility outcomes.

4.1 Regulatory Frameworks

Effective and inclusive expansion of virtual labor mobility initiatives also depend heavily on fair regulatory frameworks and access to alternative social insurance models that reflect the evolving nature of work. Clear and harmonized legal guidance on labor laws and social insurance, including pension portability, are essential to safeguard workers' rights and benefits. Many jobs within the virtual labor mobility space resemble long-standing work arrangements in developing countries, often characterized by high levels of informality and limited social protection. Self-employed virtual migrants frequently fall into the "missing middle" of social insurance, neither poor enough to qualify for social assistance nor affluent enough to participate in traditional formal social insurance programs (World Bank, 2023b).

Belgium's Overseas Social Security (OSS) scheme offers a compelling model that other countries might follow to make virtual labor mobility both viable and equitable. This portable social protection system enables workers to remain covered under Belgium's pension, health, and unemployment insurance programs, regardless of their location. Therefore, it helps safeguard virtual migrant workers, particularly during economic downturns or public health crises (Jashari, 2025).

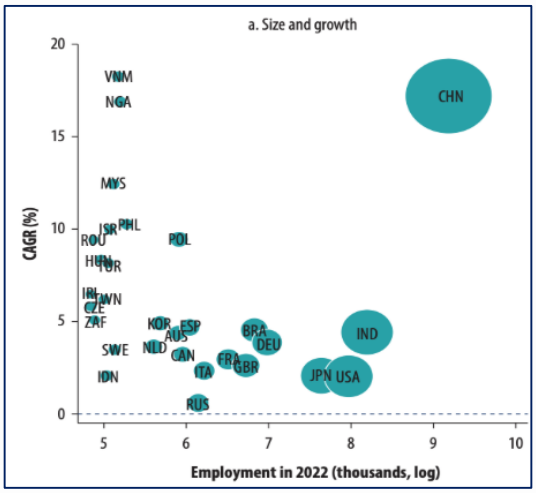
Adequate cybersecurity measures are essential for expanding opportunities in virtual labor mobility. Adequate cybersecurity protocols must be in place, including secure virtual private networks (VPNs), multi-factor authentication, regular security training, and robust data protection policies to ensure safe cross-border operations.

4. Selected Examples from ADD Member States

5.1 India: A Global Supplier of Digitally Delivered Services with a Scaled Hybrid Role

India is a central actor in virtual labor mobility and one of the hybrid profiles. Services account for **over 40 percent of India's total exports,** an unusually high share for a large emerging economy, reflecting a long-standing shift toward services-led development. Within this, **IT and business process outsourcing (BPO) services dominate,** with export revenues reaching approximately **US$157 billion in FY2021–22,** making India one of the largest global exporters of ICT-enabled services.

India's IT-services employment more than doubled from 1.4 million (2000) to 3 million (2022), and with the broader ICT + BPO-ITES ecosystem directly employing 5.1 million workers. (Figure a).



Beyond firm-level outsourcing, India is also a **major supplier of cross-border online labor through digital platforms.** Estimates by NITI Aayog suggest that the country had about 6.8 million gig workers in 2019–20, roughly 1.3 percent of total employment, with projections of 23.5 million by 2029–30 as gig work expands from 2.4 percent to 6.7 percent of the non-agricultural workforce (NITI Aayog, 2022). The workforce skews urban and young (18–45), is largely medium-skilled, and shows increasing formalization. About 36 percent are already in the organized sector via platform-mediated onboarding and payments (NITI Aayog, 2022).

Additionally, India hosts a large and growing network of **Global Capability Centers (GCCs)** that serve international firms and increasingly perform higher-value functions such as analytics, cloud services, cybersecurity, and artificial intelligence

In parallel, WDI indicators show that India also exhibits **meaningful demand-side digital service intensity**, positioning it as a **hybrid participant** in virtual labor mobility. This reflects India's deep integration into global services value chains, where domestic firms and multinational enterprises both exports digitally delivered services and **import specialized, high-value, or intra-firm digital services** from abroad. These imports do not indicate a lack of domestic capability, but rather the scale and complexity of India's services ecosystem and its role as a major node in two-way global digital service trade.

India's performance in virtual labor mobility is underpinned by a set of strong **enabling conditions**. Digital growth is anchored by a large skilled workforce, expanding digital infrastructure, and a vibrant startup ecosystem India's large, English-speaking workforce Crucially, India's demographic profile, average age 29 and roughly one-third of the population aged 15–24, positions it to supply a disproportionate share of new global workforce entrants through 2050, reinforcing the capacity to scale virtual, cross-border services (NITI Aayog, 2022).

This strength has been reinforced by a dramatic surge in connectivity: in 2018, only one in five Indians used the internet, yet between 2018 and 2022 usage grew by 170 percent (World Bank, 2023g). Cheaper mobile data improved digital literacy among women, pandemic restrictions, and government initiatives such as the Unified Payments Interface and the Digital India program all contributed to this transformation. By 2022, more than half of Indians were active internet users, vastly expanding the talent pool available for online work (World Bank, 2023g).

Finally, an important enabler is India's policy framework increasingly supports virtual and platform-based work. The **Code on Social Security (2020)** formally recognizes gig and platform workers and establishes mechanisms to extend social protection beyond formal employment, while the **e-SHRAM portal** enables portability and policy targeting through a unified worker registry (NITI Aayog, 2022). These reforms, anchored in the **Viksit Bharat 2047** vision and operationalized through **Digital India** and **Skill India**, link digital infrastructure expansion with demand-aligned skilling, strengthening India's capacity to participate in domestic and cross-border virtual labor markets.

As practical examples, **Karya and Cognizant** together illustrate how domestic platforms and global firms can enable virtual labor mobility at scale, an approach directly relevant for ADD countries. Karya connects local workers to global AI and data value chains through partnerships with Microsoft Research and Google (Project Vaani), engaging over 30,000 contributors to produce multilingual datasets used internationally, while building digital skills and inclusion through fair-wage, platform-based work.

Complementing this model, Cognizant, with more than 347,000 employees globally and nearly 40 percent female representation in its Indian workforce, demonstrates how large firms can translate domestic talent into global service delivery at scale. Through its Synapse initiative, Cognizant aims to skill one million individuals by 2026, with 270,000 workers trained in 2023 alone, aligning skills development with international demand. Together, these examples highlight how ADD member states can combine inclusive digital platforms, firm-led skilling, and global partnerships to strengthen virtual labor mobility corridors linking supply countries with demand hubs in the GCC.

5.1 Philippines: A pioneer in services exports, facing the next growth challenge

The Philippines offers a compelling case for virtual labor mobility due to its unique combination of demographic, economic, and digital strengths. With a young, growing, and English-speaking population, the country has long played a central role in the global services economy.

The Philippines' role and potential for virtual labor mobility is rooted in the country's transformation over the past two decades into a global leader in Business Process Outsourcing (BPO). The BPO sector has helped shift the economy from an agriculture-based foundation to one driven by services. As of 2024, it employs over 1.5 million Filipinos and is a key source of foreign exchange, offering customer support, IT assistance, and back-office operations to clients around the world (World Bank, 2024a).

Early growth was fueled by call centers that leveraged the country's cost-effective, English-speaking workforce, low telecom costs, and institutional similarities with the U.S. As the industry matured, firms diversified into higher-value services, including finance, legal, human resources, and advanced analytics. Companies like Penbrothers, Sprout Solutions, TCS Philippines, and Thinking Machines Data Science reflect this evolution, offering services ranging from remote HR platforms to AI and machine learning solutions (World Bank, 2024a).

The sector demonstrated remarkable adaptability during the COVID-19 pandemic, rapidly shifting to remote work to maintain business continuity. This pivot made the country an early mover in exporting digitally delivered services.

The digital services sector has been expanding over the last few years. From 2017 to 2021, job postings on major labor platforms for digitally delivered services more than doubled in the country (Figure 15). Evidence from major global labor platforms indicates that job postings for digitally delivered services in the EAP region are predominantly for skill-intensive service tasks (World Bank, 2024a). Indeed, the country consistently ranks among the top global suppliers of online labor across a wide range of skill-intensive occupations. As of 2024, it places within the top 10 countries for online labor supply in clerical and data entry, creative and multimedia services, professional services, sales and marketing support, and writing and translation. Notably, the online labor force exhibits a relatively balanced gender distribution, with 57.8 percent of workers being female (ILO, 2025a).

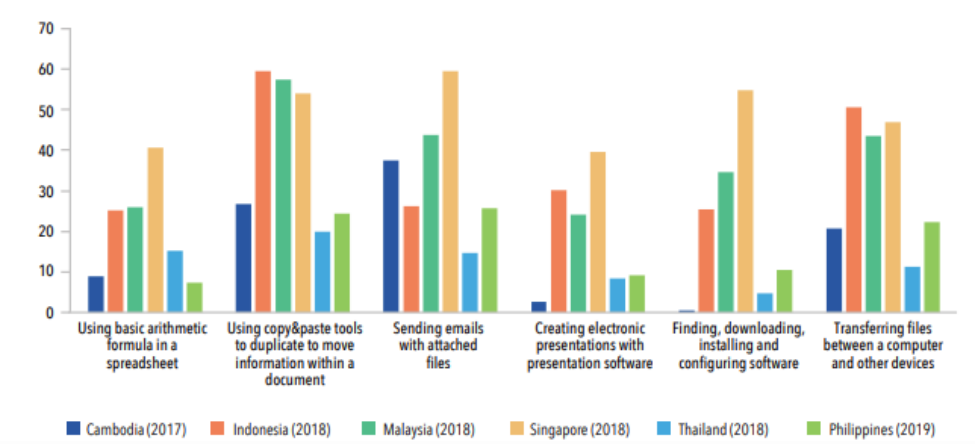
The growing importance of the digital services sector is also observed through a significant wage premium, reliable digital infrastructure, and relatively progressive regulations Digitally intensive occupations in the Philippines see a 20 percent wage premium, indicating higher earnings potential in digitally intensive roles. Electricity access is strong, reaching 98 percent of the population, a major achievement for a geographically dispersed archipelago (IEA et al., 2025). Internet penetration reached 84 percent of the population by 2023, but challenges with affordability and reliability remain[2] (World Bank, 2025a).

[2] Over 18 million Filipinos, nearly 16 percent of the population, still live in internet poverty, despite relatively low average internet costs (USD 4.80) and a favorable Big Byte Index score of 16.6, which suggests internet is priced below its value (World Data Lab, 2025).

As of 2024, the Philippines scores 70.53 out of 100 on the quality of labor regulations in the Business Ready index, lower than Cambodia's score of 80.66, but close to those of Indonesia (67.36) and Singapore (67.18) (World Bank, 2024c). While recent efforts to improve work conditions, including the 2023 Freelance workers' protection act and advisories and regulations based on the review of working conditions and issues of disputes, signal progress in the right direction, enforcement remains an area of improvement.

Sustaining this growth of the digitally delivered services sector will require addressing existing gaps in the talent pipeline. Estimates from the World Bank Generalized Labor Database (GLD) for 2022 data suggest that only 48 percent of the Philippine service sector workforce had attained secondary or tertiary education. Of those, 22 percent were classified as high-skilled and 66.8 percent as medium-skilled. Evidence on ICT skills further highlights limitations: only about one-quarter of individuals have the basic ICT skills to send e-mails with attached files or use copy and paste tools in a document and less than 1 in 10 can use basic arithmetic formulas in a spreadsheet, create electronic presentations, or install and configure software (Figure b.). At the same time, firms report difficulty sourcing workers with both technical expertise and soft skills, amid growing global competition for top talent (World Bank, 2024a).

Figure B. Share of youths and adults with ICT skills, EAP



Source: World Bank (2023c).

The Philippines exemplifies how a middle-income country can leverage digital capabilities to unlock cross-border work opportunities. With a proven track record in services exports, growing demand for online labor, and wage premiums in digitally intensive occupations, the country is well positioned to become a leader in virtual labor mobility — bringing global jobs home and fostering inclusive economic growth.

5. Data and Evidence Gaps

Despite growing interest in virtual labor mobility, important data and knowledge gaps remain that limit effective policy design and monitoring. One key gap relates to the measurement of cross-border remote work at the country and corridor level. Existing global datasets capture platform-based activity and selected remote work trends, but they often underrepresent wage employment, firm-level outsourcing arrangements, and non-platform-mediated cross-border services that are highly relevant for ADD member states.

A second gap concerns skills and occupational profiles of virtual workers. While aggregate indicators highlight broad trends in digital labor supply and demand, there is limited granular evidence on which specific skills, certifications, and experience levels are most valued by employers across different service categories. This constrains the ability of governments and training institutions to align curricula and investments with evolving labor market needs.

Finally, regulatory and institutional mapping remains incomplete. Comparative evidence on how different legal, tax, and social protection frameworks affect participation in cross-border remote work is still emerging, particularly in the context of lower- and middle-income ADD member states.

9. Recommendations and Proposed Way forward

First, investing in enabling infrastructure and digital access remains a foundational priority. While several ADD member states already exhibit high levels of connectivity, others face persistent gaps in internet affordability, quality, and reliability that constrain participation in cross-border remote work. Targeted investments—particularly in broadband expansion, affordable internet access, and reliable electricity in secondary cities and rural areas—would directly expand the pool of workers able to engage in virtual labor mobility. Such investments are especially relevant for occupations that rely on continuous connectivity, real-time communication, and secure data exchange.

Second, ADD member states should prioritize demand-aligned digital skills development. Evidence from online labor markets shows that returns to generic digital skills are declining, while demand is shifting toward specialized, applied, and AI-complementary competencies. Policy efforts should therefore move beyond basic digital literacy toward modular, occupation-specific training linked to actual employer demand. This includes strengthening links between education and training systems, private-sector employers, and online labor platforms, as well as expanding short-cycle, stackable credentials that enable workers to progressively move into higher-value digital roles.

Third, there is scope for ADD countries to leverage complementary roles across the dialogue, aligning demand from destination and hub economies with supply from origin countries through structured partnerships. These could include shared service delivery models, regional outsourcing hubs, skills partnerships tied to specific service corridors, and mechanisms that facilitate knowledge transfer and business model replication. Such approaches would allow ADD cooperation on virtual labor mobility to move beyond ad hoc hiring toward more institutionalized and scalable arrangements.

Finally, regulatory clarity and worker protection frameworks must evolve alongside market expansion. Clear guidance on labor classification, taxation, data protection, and access to social insurance is essential to ensure that virtual labor mobility delivers inclusive and sustainable outcomes. ADD member states could benefit from exchanging good practices on portable social protection models, cybersecurity standards, and contractual frameworks that protect workers while maintaining flexibility for employers.

Looking ahead, the Abu Dhabi Dialogue is well positioned to serve as a platform for coordinated learning, experimentation, and policy alignment on virtual labor mobility. Rather than treating VLM as a standalone phenomenon, ADD member states can integrate it into broader labor mobility, skills, and employment strategies.

A practical way forward would involve piloting corridor-based initiatives that link specific demand-side service needs with supply-side skills development, supported by shared standards and monitoring frameworks. These pilots could generate actionable evidence on what works, while allowing countries to adapt models to their national contexts.

In parallel, ADD could support the development of a shared evidence agenda. This includes harmonized indicators, joint analytical work, and partnerships with international organizations and data providers to improve measurement of cross-border remote work. This would strengthen the analytical foundation for future policy decisions and help track progress over time.

Ultimately, virtual labor mobility should be viewed as a complement -not a substitute- to physical labor mobility, offering additional pathways for employment, skills development, and economic inclusion. With targeted investments, regulatory innovation, and coordinated action, ADD member states can harness virtual labor mobility to generate shared benefits across origin, destination, and hub economies while responding to the evolving nature of work in a digital world.

References

Bandiera, O., Burgess, R., Das, N., Gulesci, S., Rasul, I., & Sulaiman, M. (2022). Labor markets and poverty in village economies. *Journal of Economic Perspectives, 36*(2), 191–214. https://doi.org/10.1257/jep.36.2.191

Baldwin, R. (2019). *The globotics upheaval: Globalization, robotics, and the future of work*. Oxford University Press.

BCG (Boston Consulting Group). (2024). *Decoding global talent: Onsite and virtual mobility trends*. Boston Consulting Group.

Constantinescu, C., Mattoo, A., & Ruta, M. (2024). The global trade slowdown: Cyclical or structural? *World Bank Policy Research Working Paper*. World Bank.

Demirci, M., Jäger, S., & Xu, C. (2025). Artificial intelligence and the transformation of online labor markets. *ILO Working Paper*. International Labour Organization.

Dingel, J. I., & Neiman, B. (2020). How many jobs can be done at home? *Journal of Public Economics, 189*, 104235. https://doi.org/10.1016/j.jpubeco.2020.104235

Garrote Sanchez, D., Gomez Parra, N., Ozden, C., & Rijkers, B. (2021). Which jobs are teleworkable? Evidence from developing countries. *World Bank Policy Research Working Paper*. World Bank.

Gottlieb, C., Grobovšek, J., Poschke, M., & Saltiel, F. (2021). Working from home across countries. *European Economic Review, 132*, 103679. https://doi.org/10.1016/j.euroecorev.2021.103679

Hatayama, M., Viollaz, M., & Winkler, H. (2023). Jobs' amenability to working from home: Evidence from skills surveys. *World Bank Jobs Working Paper*. World Bank.

International Energy Agency, International Renewable Energy Agency, United Nations Statistics Division, World Bank, & World Health Organization. (2025). *Tracking SDG 7: The energy progress report 2025*. World Bank.

International Labour Organization. (2025a). *Online Labour Observatory: Demand and supply of online work*. International Labour Organization.

International Labour Organization. (2025b). *Changes in online labor demand by job category*. International Labour Organization.

International Labour Organization (ILO). (2025). Generative AI and jobs: A 2025 update. International Labour Office, Geneva.

Jashari, A. (2025). Portable social protection for cross-border workers: Lessons from Belgium's Overseas Social Security scheme. *Policy Brief*.

Lightcast, & Revelio Labs. (2023). *The global skills marketplace: Using remote work to solve the talent crisis*. Lightcast.

Nayyar, G., & Davies, E. (2023). Services-led development: Implications for jobs and productivity. *World Bank Policy Research Working Paper*. World Bank.

Stephany, F., Kässi, O., Rani, U., & Lehdonvirta, V. (2021). *Online Labour Index 2020: Measuring the online gig economy*. International Labour Organization & Oxford Internet Institute.

Teodorovicz, J., Ozden, C., Testaverde, M., & Wagner, M. (2024). Knowledge spillovers from migration and remote work. *World Bank Policy Research Working Paper*. World Bank.

Teutloff, O., Rani, U., & Dhir, R. K. (2025). Generative AI and demand shifts in digital labor platforms. *ILO Discussion Paper*. International Labour Organization.

World Bank. (2016). *World Development Report 2016: Digital dividends*. World Bank.

World Bank. (2019). *World Development Report 2019: The changing nature of work*. World Bank.

World Bank. (2023a). *World Development Report 2023: Migrants, refugees, and societies*. World Bank.

World Bank. (2023b). *Protecting workers in the gig economy*. World Bank.

World Bank. (2024a). *Global services trade and development*. World Bank.

World Bank. (2025a). *World Development Indicator*s. https://data.worldbank.org

World Data Lab. (2025). *Internet poverty index*. World Data Lab.

World Bank (2024). *World Development Indicators*. Washington, DC: World Bank.