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## SKILLS GAP OR SIGNALING GAP?

INSIGHTS FROM LINKEDIN IN EMERGING MARKETS OF  
BRAZIL, INDIA, INDONESIA, AND SOUTH AFRICA

# EXECUTIVE SUMMARY

In the last few decades with the rise of the “Digital Age,” the amount of online job portals and professional networking platforms has increased significantly. These platforms can help strengthen the match between employers and job seekers, and often lower recruitment and job search costs. The datasets of these platforms can also provide us with a variety of labor market insights ranging from in-demand jobs and in-supply skills in a certain economy to industries that might experience skills gap-related challenges. For today’s tens of millions of unemployed youth, these insights are especially critical to help understand and address the information gaps and other labor market intermediation impediments that stand between them and their first or next job.

With more than 500 million members worldwide, LinkedIn is the world’s largest online professional networking platform. Tapping into the platform’s rich data repository, LinkedIn and the Solutions for Youth Employment (S4YE) Coalition – a multi-stakeholder partnership among public sector, private sector, and civil society actors to impact the global youth unemployment crisis – embarked on a research collaboration to explore how LinkedIn data can inform the conversation on youth employment and skills gap trends in emerging markets.

This research focuses on four diverse middle-income countries: Brazil, India, Indonesia and South Africa. Across these countries, we analyzed 390,000 entry-level job postings and 6.4 million LinkedIn profiles of youth inferred to be aged 21-29 to better understand top industries of employment, as well as recruitment and skills trends. Given the nature of the dataset for these four countries, the research focuses on formal sectors and high to middle level skills. We overlaid this analysis with two secondary sources, the World Bank Enterprise Surveys and ManpowerGroup Talent Shortage Surveys, to incorporate employer perspectives on the nature of skills gap in the selected countries.

## Main Research Questions:

1. What are in-demand skills on LinkedIn in Brazil, India, Indonesia, and South Africa?
2. What are areas of alignment or mismatch between supply (youth) and demand (employers) in these emerging markets? What can we learn about the nature of skills gap?
3. Comparing demand for and supply of skills, is the main challenge a skills gap, or is it a skills signaling gap?
4. What are trends in youth usage of LinkedIn in these four countries?



*Four main findings emerged:*

## **1. Employers are looking for entry-level talent with diverse skills.**

Analysis of entry-level job postings in India, Indonesia, and South Africa reveals that employers are looking for youth talent with diverse skills such as computer literacy (i.e., Microsoft Office and email), soft skills (i.e., teamwork, communications, and time management), and job-specific technical skills (i.e., engineering, programming, and marketing). Interestingly, the data shows that skills requirements for entry-level jobs consist more heavily of technical skills, ranging from 42% of the top 20 in-demand skills in Indonesia and up to 71% in India. Among these, services-related skills such as customer service, sales, and consulting are common, reflecting the growth of services sectors in emerging markets. Moreover, LinkedIn data also reveals that youth with skill sets related to advanced information and communications technology (ICT) and the Fourth Industrial Revolution (4<sup>th</sup> IR) (i.e. statistical analysis, data mining, machine-learning, and algorithm) are in high-demand, based on data analyzing skills of young LinkedIn members who switch jobs most frequently (over a time period of twelve months).

## **2. The nature of the skills gap varies per country and may not always be a critical concern.**

When companies have a difficult time finding the right talent, they often face lowered productivity, higher recruitment and training costs, and in some cases, reduced growth prospects. The skills gap – the mismatch between skills and qualifications required by employers and those possessed by job candidates – is also concerning from a youth employment perspective because it

limits the employability prospects of young people that do not possess the right skills and profiles needed for available jobs.

Using youth (supply-side) and employer (demand-side) data, we researched the relation between supply-and demand-side alignment/mismatch. On the demand-side, we looked at industries with high levels of youth employment and recruitment activity on LinkedIn; and on the supply-side, we looked at young peoples' educational majors to see if they are relevant to these same industries. Data revealed that the information technology (IT) field has the greatest alignment between these two sides on LinkedIn. Not only is IT one of the top sectors in which youth are working and a top industry for recruiters, but also, IT majors such as computer science are among the most popular fields of study with young LinkedIn members. Comparatively, other industries such as business, education, banking and finance, human resources, education, and retail show mixed alignment between supply and demand.

Complementary, secondary data from the World Bank Enterprise Surveys and ManpowerGroup Talent Shortage Surveys reveals that Brazilian employers express the greatest difficulty in finding the right employees (ranging from 43% to 75% of surveyed firms), whereas, lower proportions of Indonesian (11% of surveyed firms) enterprises report that an inadequately trained workforce is a major constraint to their operations. Employer opinions in India and South Africa are more mixed across different surveys and indicate that respectively 9%-48% and 9%-34% of the surveyed firms report skills gap problems. Based on the results of these enterprise surveys, findings indicate that not all employers feel that the skills gap is a widespread problem across the four countries, and that inconsistency among employer perceptions may reflect measurement challenges in assessing the nature of the skills gap.

### 3. While the skills gap challenge receives a lot of attention, the skills signaling gap is often neglected.

In some instances, young people may not lack labor market-relevant skills (skills gap), but may lack awareness or knowledge about the skills that employers are looking for. As such, they fail to signal the relevant skills they possess (skills signaling gap). A comparison of commonly listed skills in youth's LinkedIn profiles and required skills in entry-level job postings reveals that the mismatch in skills signaling is most pronounced for soft skills. While soft skills represent 25% of the top 20 skills in job postings, soft skills do not appear among any of the top 10 skills in young peoples' LinkedIn profiles across all four countries. Instead, young people are predominantly listing job-specific technical skills such as IT infrastructure and system management, accounting, or teaching in their online profiles.

The 6.4 million young LinkedIn members included in this analysis are well-educated (on average 58% have some university education), and many of them may have likely acquired some soft skills throughout their studies, internships, capstone projects, and extra-curricular activities. One possible explanation is that youth may not be aware that it's important to signal soft skills to employers, and likely lack the guidance on how to signal these skills in their professional profiles.

### 4. Contrary to the perception about the young being digitally savvy, youth in Brazil, India, Indonesia and South Africa underutilize LinkedIn.

In today's digital economy, it is more and more important for job-seekers to have a digital professional footprint through presence on online platforms. Online job portals and professional networking platforms such as LinkedIn can help match youth to jobs, and provide a forum to signal skills to prospective employers. On the one hand, data from LinkedIn in these four countries shows that on average over 50% of job postings on the platform are for entry-level positions. On the other hand, analysis of over 78 million LinkedIn profiles across Brazil, India, Indonesia, and South Africa shows that youth underutilize LinkedIn compared to professionals above the age of 30. Young professionals account for less than 10% of the total amount of LinkedIn members in these four countries.

Whereas, young people often have less-developed professional networks compared to adults offline, interestingly, once young people overcome barriers to creating a digital profile, they tend to have more professional connections (ranging between 128-220 connections across the four countries) than adults on LinkedIn (ranging between 76-90 connections).

## Recommendations:

*Based on these four main findings, we recommend that youth employment practitioners, funders, and policy-makers:*

1. Increase investment in comprehensive youth employment programs that support market-clearing and labor intermediation interventions.
2. Include career counseling and mentoring as part of youth employment programs to provide youth strategies to self-assess their skills and signal in-demand skills to employers.
3. Conduct targeted information campaigns to get more youth to join digital platforms that can connect them to job information, employers, and networks.
4. Integrate and encourage skills training to include soft, advanced ICT, service industry, and “4<sup>th</sup> IR” skills to respond to rising employer demand.
5. Create digital one-stop shops on labor market information, combining big data and traditional data, to track skills trends in real-time.