

Demographics, Skills, and the Role of Expatriate Talent in Saudi Arabia's Labor Market

From labor substitution to strategic complementarity under Vision 2030

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Executive Summary

Saudi Arabia's labor market transformation has entered a phase in which the central policy question is no longer whether nationals or expatriates should fill jobs in the aggregate. The more consequential question is which combinations of nationality, experience, occupation, and firm level capability will allow the Kingdom to expand high productivity non-oil activities while national employment continues to rise. The evidence assembled in this brief points to a demographic and functional complementarity. Saudi nationals are disproportionately concentrated in younger age groups and are entering the labor market with rapidly rising educational attainment and female participation. Non-Saudi workers are concentrated in the core working ages and display much higher labor force participation rates in the labor market, especially among men. Yet both populations thin at older ages, leaving a relatively narrow pool from which firms can draw long-tenured technical specialists, project leaders, and mentors.

This demographic pattern does not prove that every older expatriate is highly skilled, nor that age is a sufficient measure of productivity. It does, however, identify a structural constraint that becomes more important as economic activity shifts toward complex production, advanced services, digital systems, and large projects. Experience-intensive functions require occupational knowledge, organizational memory, professional networks, and the ability to manage rare or high-cost failures. These capabilities are accumulated through relevant work histories and are not immediately reproduced by increasing the number of new graduates. International research associates appropriately selected high skilled migration with innovation, productivity, and knowledge diffusion, but also shows that gains depend on selection, mobility, complementary domestic skills and institutions that convert co-presence into learning.

Taken together, the findings suggest value in considering whether a more explicit managed-complementarity model could improve the coordination of Saudization, capability development, and selective access to international expertise. This does not imply that such complementarity is currently absent: firms and labor market institutions already adjust organically or on a case-by-case basis, while Saudization remains the principal instrument for expanding national opportunity and flexibility is applied where Saudi capabilities are not yet available at the required occupation, specialization, or seniority level. The central question is whether these decentralized adjustments will be sufficient to meet the pace and complexity of emerging demand. A more structured approach could preserve Saudization as the foundation of national capability development while using evidence on scarcity and experience to identify areas where selective migration, retention, and workplace knowledge exchange may provide complementary value. This would connect migration policy more closely to the Kingdom's human-capital strategy, allowing expatriate expertise to address clearly identified capability gaps while Saudi professionals accumulate the experience required for increasingly complex technical and leadership roles.

1. Introduction

Vision 2030 has changed the scale and composition of labor demand in Saudi Arabia. The expansion of tourism, logistics, digital services, renewable energy, advanced manufacturing, health, culture and other non-oil activities require not only more workers but also a different distribution of capabilities inside firms. Recent official and IMF assessments document the continued diversification of economic activity, the expansion of national labor market participation and the broader structural reforms undertaken since the launch of the Vision 2030 reform project in 2016 (Saudi Vision 2030, 2026; IMF, 2025a; Koll et al., 2026). The labor market objective is therefore dual: broaden national employment and raise the productivity and complexity of the jobs being created, recognizing that sustained productivity growth depends on innovation, human-capital accumulation and the effective allocation of resources across firms and activities (World Bank, 2021).

Saudization and expatriate employment are not necessarily competing objectives; their relationship is more appropriately assessed at the level of specific tasks, capabilities, and production processes. Workers can be substituted within a narrowly defined task and complementary within a production system. A Saudi engineer and an expatriate engineer with twenty years of commissioning experience are not necessarily interchangeable at a particular moment, even if both occupy the same broad occupational family. When the experienced worker stabilizes a project, codifies procedures, and mentors a local team, the relevant outcome is not one job displaced, but a capability created. Conversely, expatriate recruitment that repeatedly fills routine positions without developing national capability can weaken incentives to invest in training. Sound policy must distinguish between these cases.

This brief uses age-specific, working-age population and labor force participation data from the General Authority for Statistics (GASTAT, 2026) and asks three questions. First, what does the age structure reveal about the potential supply of labor market experience? Second, under what conditions can mature or skilled expatriates complement rather than displace national workers? Third, how should migration, Saudization, and skills policy be joined so that imported capability produces domestic accumulation? The brief's claim is deliberately narrower than an argument for more migration: Saudi Arabia needs more selective migration, better retention of scarce capability, and stronger accountability for knowledge transfer. Age is used here as a demographic marker, not as a direct measure of competence. Education, occupation, tenure, sector, licensing, performance, and task complexity are superior measures of skill. The value of the age profile is that it reveals how many people are available at stages of the life course in which advanced experience is usually accumulated. Any operational targeting mechanism should therefore use linked administrative data on occupations, wages, qualifications, and employment histories rather than age alone.

Saudi nationals are disproportionately concentrated in younger age groups and are entering the labor market with rapidly rising educational attainment and female participation. Non-Saudi workers are concentrated in the core working ages and display high labor force participation rates in the labor market, especially among men. Yet both populations thin at older ages, leaving a relatively narrow pool from which firms can draw long-tenured technical specialists, project leaders, and mentors. This demographic pattern does not imply that every older expatriate is highly skilled or that age alone provides a sufficient measure of productivity. Age is relevant primarily because it may proxy for accumulated, but highly heterogeneous work experience. Occupational composition is also an important qualification for this interpretation. A substantial proportion of expatriate employment is concentrated in manual, operational, service, and other comparatively lower-paid occupations, including jobs that may attract limited Saudi labor supply under

prevailing wages and working conditions. Older age within this workforce does not necessarily indicate organizational seniority, advanced qualifications, or an ability to train Saudi professionals. At the same time, a simple blue collar–white collar distinction is also insufficient: some technical, craft, maintenance, construction, and operational occupations depend heavily on accumulated experience, safety knowledge, and familiarity with complex equipment or processes. The capability-building argument in this brief therefore, concerns a narrower group of expatriates, including senior professionals, managers, specialists, technicians, and experienced skilled trade workers whose knowledge is scarce, relevant to production, and potentially transferable. It does not treat the older expatriate population as a whole as a pool of senior experts or prospective mentors.

Labor economics research shows that productive capabilities are developed through job tenure and the performance of particular tasks, making some forms of human capital difficult to replace immediately through formal education or an expansion in the number of new graduates (Topel, 1991; Gibbons and Waldman, 2004). This distinction becomes increasingly important as economic activity shifts toward complex production, advanced services, digital systems, and large-scale projects. Technological change alters the task content of occupations and can simultaneously displace some forms of work while increasing demand for complementary technical, cognitive, and organizational capabilities (Autor, 2015; Acemoglu and Restrepo, 2018). Such activities rely not only on formal qualifications but also on occupational knowledge, organizational memory, professional networks, and the capacity to diagnose and manage infrequent but costly problems, capabilities that organizations accumulate and distribute across experienced workers and specialized problem-solvers (Garicano, 2000).

International evidence also indicates that appropriately selected highly skilled migration can contribute to innovation and productivity. Skilled immigrants have been associated with higher rates of patenting and innovation in the United States, while the expansion of foreign STEM employment has been linked to productivity and wage gains in U.S. cities (Hunt and Gauthier-Loiselle, 2010; Kerr and Lincoln, 2010; Peri, Shih and Sparber, 2015). These benefits are not automatic, however. Their magnitude depends on immigrants' occupational and educational composition, the complementarity between foreign and domestic workers, and whether labor market and organizational institutions allow knowledge to be matched, used, and transmitted effectively. Research showing that immigrants and native workers often specialize in different but complementary tasks reinforces the importance of productive matching rather than migrant numbers alone (Peri and Sparber, 2009). Accordingly, the relevant policy question for Saudi Arabia is not whether age or expatriate status constitutes evidence of productivity, but whether particular expatriate workers possess scarce, experience-based capabilities and operate in settings that enable those capabilities to complement Saudi talent and support knowledge diffusion.

2. Saudi Arabia's Demographic Divergence

2.1 A young national workforce and an expatriate core

The Saudi population aged 15 and above is markedly younger than the corresponding non-Saudi population. In the data used for this brief (GASTAT, 2026), 28.2 percent of Saudi nationals are aged 15–24 and a further 24.7 percent are aged 25–34. Thus, more than half of the Saudi national population aged 15 and above is below 35 (Table 1). The corresponding share among non-Saudis is 47.8 percent, but its composition is notably different: non-Saudis are much less concentrated at ages 15–24 and substantially more concentrated at ages 25–44. This reflects the selective nature of labor migration. Unlike the national population, which includes individuals before they enter employment, expatriates generally migrate to

Saudi Arabia in response to a specific employment opportunity, usually after completing their education and, in many cases, after acquiring some initial labor market experience. The non-Saudi population is consequently concentrated in the ages at which international labor mobility and employer demand are strongest.

The upper part of the age distribution is relatively thin in both populations. Only 12.7 percent of Saudis are aged 45–54 and 14.0 percent are aged 55 or above. Among non-Saudis, 14.1 percent are aged 45–54 and only 7.1 percent are aged 55 or above. The small non-Saudi share at older ages can be partially attributed to a general pattern of temporary migration and departure near retirement. However, it also reflects the sectoral and occupational composition of expatriate employment. A substantial proportion of expatriate workers are recruited into physically demanding, comparatively lower-paid occupations characterized by shorter employment and migration cycles. Workers in these positions may leave the Kingdom well before conventional retirement age, whether because of the physical requirements of the job, limited opportunities for occupational progression, the completion of projects or contracts, or employer decisions concerning recruitment and renewal. This pattern differs from the occupational distribution and employment trajectories of Saudi nationals, who are more frequently represented in professional, administrative, clerical, and public-sector positions that may support longer and more continuous working lives.

The relatively small non-Saudi population aged 55 and above therefore reflects several overlapping selection processes: the ages at which migrants are initially recruited, the sectors and occupations in which they work, the expected duration of their contracts and projects, and the likelihood of remaining in the Kingdom as they approach retirement. At the same time, the Saudi 55+ category includes both economically active individuals and inactive retirees and therefore cannot be interpreted as the available senior national workforce. Population shares alone consequently provide only an initial indication of the Kingdom's potential experience base. Labor force participation and employment rates are needed to determine how much of each age group contributes to effective labor supply.

Table 1. Percentage distribution of the working age population (aged 15 and above) by nationality (Q1, 2026)

Population group	15–24	25–34	35–44	45–54	55+	Total
Saudi nationals	28.2	24.7	20.4	12.7	14.0	100.0
Non-Saudis	12.4	35.4	31.0	14.1	7.1	100.0
Total population	19.5	30.6	26.3	13.5	10.2	100.0

Source: GASTAT Labor Force Statistics, Q1 2026. Percentages may differ slightly from 100 because of rounding.

2.2 Participation reveals the effective experience gap

Participation differences across age groups are given in Table 2. Saudi male participation is high at ages 25–44 but falls from 91.1 percent at ages 35–44 to 77.7 percent at ages 45–54 and 36.8 percent at 55+. Saudi female participation has risen rapidly but remains below 50 percent in each core age group and falls to 14.8 percent at 55+. The result is an experienced national population whose effective labor supply narrows sharply in later career stages.

Non-Saudi men display near universal labor force participation throughout the core working ages, with participation remaining exceptionally high, at a reported 94.1 percent, even among those aged 55 and above. This pattern reflects the close connection between expatriate residence and employment: most non-Saudi men enter and remain in the Kingdom as workers, while those who leave employment are also more likely to leave the country. The participation rate at older ages is therefore calculated for a highly selected population consisting predominantly of men who continue to be economically active.

Non-Saudi women exhibit a markedly different profile. Their participation rate peaks at 45.3 percent among those aged 25–34 and declines across the subsequent age groups. This pattern may partly reflect marriage, fertility, and increasing care responsibilities over the life cycle. It also reflects differences in migration status and selection: although many non-Saudi women migrate specifically for employment, others enter or reside in the Kingdom as accompanying spouses or dependents and may not participate in the labor market. The aggregate non-Saudi participation profile is consequently shaped by both employment-based selection and the strongly male-skewed composition of the expatriate population. These figures reflect the fact that the migration and residency system disproportionately selects economically active men, while the non-Saudi female population includes a more heterogeneous combination of workers and accompanying family members.

The most important comparison is therefore not simply Saudi versus non-Saudi participation. It is the interaction between age structure and labor force participation rates as an indication of labor market attachment. Saudi Arabia has a large pipeline of young nationals, but participation among those aged 15–24 remains relatively low (24.3 percent). This is an important feature of the Saudi labor market, but it does not necessarily represent a weakness. The rate partly reflects high participation in secondary and tertiary education, the sequencing of education and employment, and the institutional structure of the transition from school to work. It may also reflect the relatively limited availability or attractiveness of part-time, temporary, apprenticeship, and other forms of student-compatible employment. In countries where combining education and employment is common, measured youth participation can be substantially higher even when educational enrollment is similar (as illustrated by the higher participation of this age group in the United States, for instance). Family resources, cultural expectations, and individual preferences concerning when young people should begin working may further encourage a more sequential pathway in which education is completed before labor market entry. International labor research similarly shows that youth participation and employment patterns depend heavily on national education systems, vocational pathways, and the institutions connecting education to work (Ryan, 2001).

Low participation among Saudi youth should therefore be interpreted alongside educational enrollment, completion, part-time employment, school-to-work transition duration, and the share of young people not in employment, education, or training. At the other end of the age distribution, Saudi Arabia has fewer economically active workers in late-career stages. Expatriate employment supplies a large core-age workforce, yet prevailing migration, occupational, and retirement patterns also limit its senior tail. This is the demographic basis of the potential experience-intensive capability gap, which is the focus of this policy brief.

Table 2. Labor force participation rates by nationality, sex, and age group (Q1, 2026)

Age group	Saudi M	Saudi F	Saudi total	Non-Saudi M	Non-Saudi F	Non-Saudi total	All total
15–24	31.7	16.8	24.3	66.5	21.4	54.8	35.0
25–34	87.4	48.1	67.8	97.0	45.3	86.0	79.4
35–44	91.1	45.6	68.4	99.0	35.3	86.5	80.2
45–54	77.7	46.8	61.9	98.6	32.2	87.3	76.6
55+	36.8	14.8	25.3	94.0	14.2	78.6	45.8
25–54	86.6	46.9	66.7	98.1	39.6	86.4	79.2
15+	64.2	33.9	49.0	94.1	35.1	81.9	67.2

Source: GASTAT Labor Force Statistics, Q1 2026; author presentation. M = male; F = female.

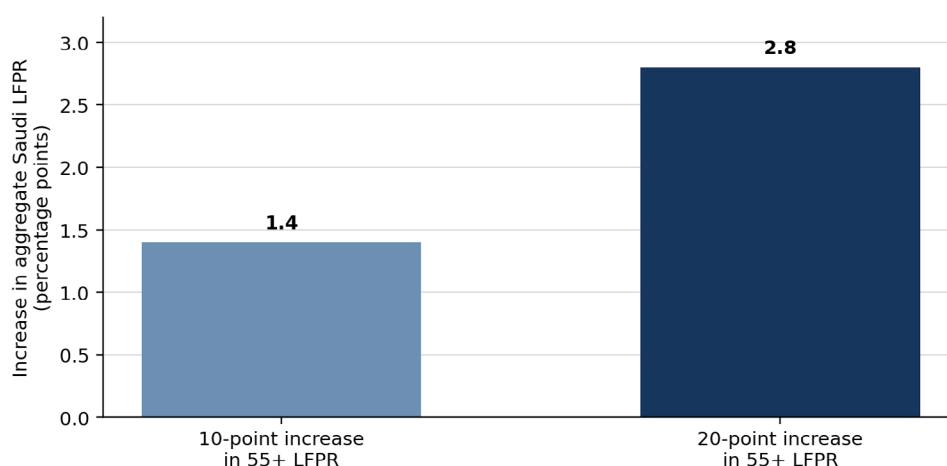
2.3 Counterfactual evidence: the late-career participation margin

The remainder of the brief focuses on the upper end of the age distribution. As established in Section 2.2, the comparatively low labor force participation rate (LFPR) of Saudis aged 15–24 is not, by itself, evidence of weak labor market attachment. It partly reflects educational enrollment, the sequencing of education and employment, the availability of student-compatible work, and country-specific preferences and institutions governing the transition from school to work (Ryan, 2001). Assessing that age group properly would require separate evidence on enrollment, part-time work, transition duration, and the share of young people not in employment, education, or training. The demographic constraint examined from this point onward is different: the relatively small effective supply of workers in later-career stages, when occupation and organization-specific experience is generally most accumulated.

A simple reweighting exercise illustrates the importance of this late-career margin. Saudis aged 55 and above account for approximately 14.0 percent of the Saudi population aged 15 and above, but their LFPR is only 25.3 percent. Holding the age distribution and all other age-specific participation rates constant, a 10-percentage-point increase in the LFPR of this group would raise the aggregate Saudi LFPR by approximately 1.4 percentage points. A 20-percentage-point increase would raise it by approximately 2.8 percentage points. These are material changes generated by one age group alone (Figure 1).

This exercise is deliberately presented as a scenario rather than as a claim that Saudi Arabia needs to reproduce another country's participation rate. The open-ended Saudi category of 55+ is not directly comparable with the 55–64 category commonly reported in international datasets: the former includes people above conventional retirement ages, while the latter does not. Countries also differ in pension rules, health, occupational composition, working-time arrangements, survey definitions, and the prevalence of self-employment. Using a foreign 55–64 rate as though it were a like-for-like benchmark for Saudi 55+ would therefore overstate comparability. The scenario instead answers a narrower accounting question: how much would the aggregate Saudi participation rate change if late-career attachment strengthened by a specified amount?

Figure 1. Illustrative contribution of higher Saudi 55+ participation to the aggregate Saudi LFPR



- Scenario A: 55+ LFPR increases by 10 percentage points → aggregate Saudi LFPR increases by approximately 1.4 percentage points
- Scenario B: 55+ LFPR increases by 20 percentage points → aggregate Saudi LFPR increases by approximately 2.8 percentage points

Source: Author calculations using the Saudi 55+ population share in Table 1. The calculation holds the age distribution and all other age-specific participation rates constant.

Still, cross-country comparisons provide useful context. Table 3 compares the age distribution of the working-age population among Saudi nationals with that of the overall U.S. population. The comparison highlights the relative youth of Saudi Arabia's national working age population: Saudi nationals are more heavily concentrated in the younger age groups, while the share in the older working age categories is considerably smaller than in the United States.

Table 3. Comparison of the age distribution of the working age population among Saudi (nationals only) and U.S. populations (Q1 2026)

Age group	Saudi Nationals	U.S.
15–24	28.2	14.5
25–54	57.8	47.4
55–64	8.1	14.8
65+	6.0	23.3

Sources: U.S. data for Q1 2026 are obtained from the OECD country database for the following age groups: 15 years and above, 15–24, 25–54, 55–64, and 65 and above. The author converted the reported population totals into percentage distributions. For Saudi Arabia, the data are drawn from GASTAT's Labor Force Statistics for Q1 2026 and are reported for the age groups 15–24, 25–54, and 55 and above. The Saudi 55+ population is further divided into the 55–64 and 65+ categories using the respective population shares recorded in the 2022 Saudi Census. All calculations are conducted by the author.

Table 4 compares the labor force participation rates of Saudi nationals with those of the United States. Because the Saudi data do not distinguish between persons aged 55–64 and those aged 65 and above, the observed Saudi rate is reported for the combined 55+ category. For the counterfactual exercise, however, the U.S. participation rates for the 55–64 and 65+ age groups are applied separately to the corresponding Saudi population shares. Under this scenario, the overall participation rate of Saudi nationals rises by approximately 3 percentage points, from 49 percent to 52 percent. This result is broadly consistent with the 2.8 percentage-point increase obtained from the 55+ counterfactual presented in Figure 1.

Table 4. Comparison of the labor force participation rates among Saudi (nationals only) and United States' populations (Q1, 2026)

Age group	Saudi Nationals	U.S.	Saudi Counterfactual
15–24	24.3	55.4	24.3
25–54	66.7	83.9	66.7
55–64	25.3*	66.5	66.5
65+		18.9	18.9
Overall	49.0	62.0	52.0

Sources: U.S. data for Q1 2026 are obtained from the OECD country database for the following age groups: 15 years and above, 15–24, 25–54, 55–64, and 65 and above. The participation rates are calculated by the author using the reported labor force and population totals. For Saudi Arabia, the data are drawn from GASTAT's Labor Force Statistics for Q1 2026 and are reported for the age groups 15–24, 25–54, and 55 and above. In the counterfactual scenario, the U.S. participation rates for the 55–64 and 65+ age groups are applied separately to the corresponding Saudi population groups. All calculations are conducted by the author.

* For Saudi nationals, the observed participation rate is reported for the combined 55+ age group.

It is important to note that these calculations are not behavioral forecasts. They do not model retirement decisions, health limitations, wages, hours, employer demand, displacement across age groups, or general-equilibrium responses. Nor does it imply that every older person can or needs to remain in conventional full-time employment. Its policy significance is that Saudi Arabia has meaningful scope to preserve more accumulated experience through flexible work, advisory and project-based roles, reskilling, return-to-work pathways, and technical career tracks. The relevant objective is not simply to increase the number of older workers, but to retain productive experience in forms that match worker capabilities and employer needs.

2.4 Female participation is enlarging the future experience base

The increase in Saudi women's participation is one of the most consequential labor market changes of the Vision 2030 period. Official reporting and recent World Bank analysis associate this rise with legal and regulatory reforms, changes in mobility and workplace conditions, active labor market programs, expanding private-sector demand, and shifting social norms (World Bank, 2023; World Bank, 2026; Saudi Vision 2030, 2025). In Q1 2026, Saudi female participation reached 48.1 percent at ages 25–34, 45.6 percent at ages 35–44, and 46.8 percent at ages 45–54 (Table 2). This represents a much larger national talent base than existed a decade ago.

The rapidity of this transformation also creates a sequencing issue. Participation can expand entry and mid-career employment much faster than the economy can generate senior experience. A decade of reform cannot immediately produce two or three decades of sector-specific tenure, responsibility, and problem-solving. This temporal constraint is especially important in activities that have recently scaled or in which Saudi women previously had limited access to career-building assignments. Selective expatriate expertise can help bridge this period when it is used to expand production, supervise complex work, and accelerate Saudi progression rather than to reserve decision-making functions indefinitely for expatriates.

Participation is also distinct from retention and advancement. Childcare, transport, flexible work, workplace conditions, and transparent promotion affect whether women remain employed through the years in which advanced occupational experience is accumulated. Existing policy support and labor market reforms have facilitated entry, but their longer-term contribution will depend on whether women sustain employment, move into substantive technical and managerial functions and progress to senior roles (World Bank, 2023; Gomez Tamayo et. al., 2026). From the perspective of this brief, stronger mid-career continuity among Saudi women is therefore not only a participation objective; it is a central mechanism for widening the Kingdom's future pool of experienced Saudi specialists and leaders.

3. International Comparison: Lessons for Retaining Late-Career Capability

International comparisons are most useful here as evidence about mechanisms, not as targets to be copied mechanically. Germany and Japan have older population structures and relatively high participation among workers in the years preceding retirement. Their experience shows that an older workforce can remain economically active when pension incentives, employer practices, continuing training, job design and health permit longer working lives. The United Kingdom and the United States combine longer careers with migration, but their labor markets, pension systems and age categories differ substantially from those of Saudi Arabia. China faces a different version of the same strategic concern: a large experienced workforce is moving toward retirement, increasing the importance of succession and knowledge retention. These cases illustrate alternative institutional responses to an aging or thinning experience base; they do not supply directly transferable participation-rate benchmarks. A summary of these findings is summarized in Table 5.

Saudi Arabia's configuration is distinctive. Its national population is young, its female labor supply has expanded rapidly, and its non-Saudi workforce is selected heavily into employment and the core working ages. Yet the active senior tier remains relatively thin. Among Saudis, participation declines sharply at 55+. Among non-Saudis, the population share at 55+ is small even though the participation of those who remain is high. The result is not a general shortage of older people, but a potential shortage of workers with the particular occupational histories, organizational knowledge and project experience required for complex functions.

The appropriate comparison is therefore institutional. Advanced economies that retain older workers typically use combinations of later retirement, flexible hours, gradual retirement, workplace adaptation, lifelong learning and non-managerial expert careers. Migration systems that obtain larger productivity gains tend to combine selection with mobility and productive matching rather than relying on migrant volume alone (OECD, 2014; OECD, 2022; OECD, 2023a). For Saudi Arabia, these lessons point toward two complementary margins: extending productive working lives among nationals and retaining selected expatriates whose verified experience fills a genuine capability gap.

Cross-country statistics nevertheless require careful harmonization. “55+” is not equivalent to “55–64,” and national observations are not automatically comparable with international reported and modelled estimates (ILO, n.d.; ILO, 2026). Population denominators, survey years, treatment of institutional populations and the beginning and end of working age can all differ. International evidence in this brief is consequently used to identify plausible mechanisms and policy arrangements. As evident in our analysis in Table 4, harmonization requires careful effort to compare cross country statistics based on their reporting conventions. One obvious recommendation here could be to report Saudi statistics beyond 55+ category to 55–64 and 65+ to make comparable across many databased for other countries. 55+ is a very rough category, especially for policies targeting this end of the age spectrum. Any quantitative benchmark used for official target-setting would need identical age bands, sex coverage, source type and reference years, consistent with for instance ILOSTAT concepts and definitions.

Table 5. Institutional comparison of late-career labor supply

Comparator	Late-career context	Potential institutional lesson for Saudi Arabia
Saudi nationals	Sharp decline in participation at 55+; limited active senior tier	Preserve accumulated national experience through flexible late-career pathways and continued skills investment
Non-Saudis in Saudi Arabia	Small 55+ population share but very high participation among those remaining, especially men	Retain selectively where verified experience is scarce and link retention to productive mobility and capability transfer
Germany and Japan	Older population structures with relatively strong late-career attachment	Pension incentives, lifelong learning and age-compatible job design can extend productive working lives
United Kingdom and United States	Older domestic workforces combined with skilled migration	Migration can supplement domestic experience, but outcomes depend on selection, mobility and institutions
China	Rapid aging and growing succession pressures	Knowledge retention and replacement planning become more important before experienced cohorts exit

Source: author synthesis based on ILOSTAT labor force concepts, OECD evidence on ageing and migration, and national labor market patterns. The table identifies mechanisms and does not assert point-estimate comparability.

4. Why Experience Intensive Expatriate Talent can be Complementary

4.1 Experience is a production input, not merely an individual attribute

Complex production depends on more than formal qualifications. It relies on judgment about unusual failures, sequencing, stakeholder coordination, safety, quality control, and the adaptation of general standards to local operating conditions. Some of this knowledge can be codified, but much of it is accumulated by performing particular tasks, confronting problems, and learning within organizations. Labor-economics research accordingly distinguishes general education from job-, task- and organization-specific human capital (Topel, 1991; Gibbons and Waldman, 2004). Garicano’s (2000) analysis of knowledge-based production further shows why organizations depend on specialized problem solvers who address less frequent and more complex problems.

Age is therefore informative only as an imperfect demographic marker of the time over which experience may have been accumulated. It cannot establish that a worker possesses valuable expertise. The relevant expatriate for the present argument is not simply an older person, but someone whose verified employment history fills a capability that is scarce relative to Saudi project and production needs, for example, an engineer who has commissioned comparable systems, a clinician in a rare specialty, a researcher who has built laboratories or research teams, a project director experienced in complex multi-contractor delivery, or a technical instructor able to convert practice into curricula.

The same principle applies outside of formally high-skilled occupations. Workers in lower-paid or manually intensive jobs may possess substantial task-specific knowledge that improves productivity, safety, quality, and the training of new workers. Occupational labels and wages are therefore insufficient proxies for productive experience. Selection needs to consider the task performed, the worker's employment history, the scarcity of the capability, the consequences of error, and the availability of credible substitutes. The appropriate policy unit is the occupation–task–experience combination, not nationality, age, or educational credentials in isolation (Gibbons and Waldman, 2004; Erumban and Al-Mejren, 2024).

This distinction prevents two analytical errors. The first is assuming that all expatriate employment raises productivity. Evidence from developing economies and the GCC shows that outcomes vary with migrant composition, occupation, sector, and institutional setting (OECD and ILO, 2018; Erumban and Al-Mejren, 2024). The second is assuming that replacing an expatriate headcount with a Saudi headcount demonstrates capability transfer. A numerical replacement may satisfy a quota while leaving the establishment dependent on consultants, external escalation, or a small number of unrecorded specialists. Capability has been transferred only when the relevant critical tasks can be performed reliably and independently.

4.2 Innovation, productivity, and productive matching

International evidence provides credible mechanisms for complementarity. Skilled immigrants have contributed disproportionately to patenting and innovation in the United States, while expansions in foreign STEM employment have been associated with higher productivity and wages for native workers in U.S. cities (Hunt and Gauthier-Loiselle, 2010; Kerr and Lincoln, 2010; Peri, Shih, and Sparber, 2015). Research also finds that migrants and native workers may specialize in different but complementary tasks, allowing the allocation of work to adjust in ways that raise productivity (Peri and Sparber, 2009). OECD evidence similarly indicates that the regional gains from migration vary with migrant skills, local conditions, and the institutions governing integration and matching (OECD, 2022; OECD, 2023b).

Complementarity arises when imported experience expands the productivity, responsibility, or occupational scope. A senior specialist may enable a project that employs a larger Saudi team, reduce costly errors and delays, introduce a production method, support licensing or certification, or allow Saudi professionals to assume complex tasks earlier than would otherwise be possible. Substitution dominates when firms use expatriate recruitment mainly to lower labor costs, confine Saudi employees to peripheral assignments, or renew the same external dependency without a credible succession path. The policy objective is therefore not to presume complementarity, but to identify and reward arrangements that produce it.

Recent GCC evidence reinforces the need for this distinction. Erumban and Al-Mejren (2024) show that the relationship between expatriate employment and productivity varies by the composition of

expatriate jobs and by sectoral context in Saudi Arabia and Kuwait. Wagle (2024) similarly argues that Gulf migration has often responded reactively to labor demand and would benefit from a closer strategic connection to development objectives. The relevant conclusion is not a general preference for more expatriate labor. It is a preference for evidence-based selection, productive matching, and retention where verified experience generates benefits that cannot be reproduced immediately by the available domestic workforce.

4.3 Workforce blending requires an organizational mechanism

Co-location does not guarantee learning. Knowledge transfer requires shared work, sufficient duration, incentives to teach and learn, and systems that capture what has been transferred. Research on retiring and experienced workers emphasizes that knowledge retention is an organizational process involving motivation, opportunity, documentation, and absorptive capacity (Szulanski, 1996; Argote and Ingram, 2000; Burmeister and Deller, 2016). OECD likewise highlights mentoring, coaching, job rotation, mixed-age teams, documentation, and internal mobility as complementary mechanisms rather than interchangeable activities (OECD, 2024).

Firms, therefore, need to translate the broad idea of workforce blending into named Saudi counterparts, task-based development plans, supervised responsibility, access to core functions, and observable milestones. The relationship should also be reciprocal. Saudi employees contribute local institutional knowledge, Arabic-language capability, digital fluency, and knowledge of domestic consumers and regulation, while experienced expatriates may contribute sectoral, technical, and project knowledge. Diverse teams become productive when organizations integrate these knowledge bases and give Saudi employees genuine responsibility rather than treating them as passive recipients.

A particularly important setting for the complementarity is the delivery of government and semi-government projects through tenders, framework agreements, and other contracting arrangements. Expatriate professionals commonly participate in this system through two channels. The first consists of specialists employed by construction companies, consultancies, technology providers, and other contractors engaged to deliver specific projects or services. The second consists of expatriate professionals employed directly by government or semi-government entities, who can provide continuity between the institution and its contractors by translating organizational requirements into technical specifications, evaluating proposals, overseeing implementation, and retaining knowledge across successive contracts. Both groups can contribute to national capability development when Saudi professionals participate substantively in project design, contractor management, technical decision making, and delivery. This contribution is not automatic, however: short contractual cycles, repeated outsourcing, or limited involvement of Saudi counterparts may leave critical knowledge with external providers. The project based public sector ecosystem therefore offers an important setting in which to examine when expatriate expertise complements Saudi employment and when contracting arrangements successfully embed capabilities within national institutions.

A credible transfer plan needs to remain effective after the expatriate specialist departs. Completion is demonstrated through outcomes such as critical tasks performed independently by Saudi staff, professional certification, reduced reliance on external escalation, documented operating knowledge, successful delivery milestones, and progression into positions of higher technical or managerial responsibility. Training hours, attendance, and mentoring meetings are input; they are not, by themselves, evidence that capability has been transferred.

5. Improving Retention: Retirement, Residency, and Labor Market Reform

Saudi policy is already moving in directions consistent with longer working lives and more differentiated talent attraction. The 2024 Social Insurance Law introduced a retirement age of 65 for new civil employees entering the public or private sectors without prior contribution periods. Transitional amendments to retirement age and early-retirement contribution requirements apply to existing contributors who, on 3 July 2024, were below 50 Hijri years of age and had fewer than 240 months of credited contributions; for affected groups, the statutory retirement age rises gradually within a range of 58 to 65, while the contribution period required for early retirement also increases gradually (GOSI, 2024). These provisions can lengthen working lives over time, but their labor market effect will depend on whether employers provide productive late-career roles, continuing training, workplace adaptation, and flexible pathways rather than merely extending formal tenure.

The expansion of Premium Residency (PR) into pathways for special talent, gifted individuals, investors, entrepreneurs, and property owners represents an important development, offering eligible residents greater continuity, family residency, employment mobility, and selected business and property rights (PRC, 2026). The expansion provides a basis for retaining high-value non-Saudis beyond a sequence of short contracts. Their economic rationale is strongest when greater residency stability encourages specialists to make longer-term investments in firms, professional networks, and family life (PRC, 2026). A longer horizon can reduce costly turnover and provide more time for knowledge transfer. Residency status, however, is not in itself evidence of labor market value. Eligibility and renewal are most economically defensible when informed by verified occupational scarcity, performance, experience, and contribution.

Labor mobility is equally important. Scarce talent produces more value when it can move toward the establishment, project, or region where its capabilities are most productive. International evidence suggests that the contribution of migration depends not only on the regulation of entry but also on matching, mobility, and the alignment of migrant capabilities with changing labor market needs (Gomez Tamayo et al., 2025; OECD and ILO, 2018; OECD, 2022; OECD, 2023b). Saudi Arabia has already expanded regulated mobility through the Labor Reform Initiative, Qiwa, and Ajeer (MHRSD, 2020; MHRSD, 2025). Building on these reforms can reduce employer-specific dependency and help retain valuable experience within the Kingdom when a particular contract or employment relationship ends. Greater mobility can also strengthen matching quality and worker bargaining power, while reducing the risk that retention rests on dependency rather than job quality, contractual protection, and productive employment relationships (OECD and ILO, 2018; ILO, 2024).

The decision to remain in or relocate to a country rarely depends on employment considerations alone. For highly skilled workers, family circumstances and overall quality of life can be equally important, including access to good schools and healthcare, employment opportunities for spouses, suitable housing, urban amenities, and prospects for long-term stability. International evidence suggests that these broader household considerations, particularly the ability of spouses to participate in the labor market, can significantly influence a country's ability to attract and retain skilled talent (OECD, 2014; OECD, 2023a). Saudi Arabia's Quality of Life Program strengthens this broader value proposition through improvements in urban livability, public services and transport, culture, recreation, sports, and entertainment; importantly, its objectives explicitly include improving living conditions for expatriates. The Health Sector Transformation and Housing programs, together with major investments in urban development, further contribute to the environment in which internationally mobile professionals and

their families make long-term location decisions (Saudi Vision 2030, 2021; Quality of Life Program, 2025). These initiatives complement labor market and residency reforms, but targeted attention to international-school accessibility, spouse employment, recognition of professional qualifications, and continuity for dependent children remain relevant. As emphasized in earlier work, attracting international talent can help address immediate capability shortages in Saudi Arabia, but the longer-term contribution of this talent depends on whether skilled professionals can build sustained careers and family lives in the Kingdom (Soytaş, 2026). A coherent Saudi value proposition therefore involves not only the right to remain, but also the household conditions that make a durable professional and personal commitment feasible for the selectively defined groups whose experience the Kingdom seeks to retain.

The IMF's assessments of Saudi Arabia emphasize both the responsiveness of expatriate labor supply and the importance of aligning national skills with changing demand (IMF, 2025a; IMF, 2025b). These are connected instruments. Access to expatriate labor can accelerate projects and relieve immediate bottlenecks, but recruitment that is easier than internal development may weaken firms' incentives to train and promote. Policy can preserve access where experience is genuinely scarce while making Saudi capability formation an explicit condition of privileged or extended access.

6. Policy Insights and Recommendations

The demographic evidence supports a focused policy objective: enlarge Saudi Arabia's effective stock of late-career experience while using selected expatriate capability to bridge gaps that cannot be filled immediately. This is not a recommendation to raise expatriate employment generally, nor is it an argument that older workers are necessarily more productive. It is a framework for identifying experience-intensive constraints and addressing them through the joint design of late-career employment, migration, mobility, residency, and workplace capability development. The contribution of this brief is to place this otherwise intuitive policy argument on a measurable empirical foundation. The observed age distribution and age-specific labor force participation rates show where Saudi Arabia's effective senior workforce is comparatively thin and why selectively retaining relevant experience can complement the longer-term development of Saudi capabilities. These demographic indicators do not determine the appropriate policy response by themselves, but they provide a factual basis for identifying the constraint and designing a proportionate response.

A. Extend productive working lives among Saudis

Saudi Arabia can obtain more value from experience already accumulated by nationals by developing flexible late-career pathways. These may include reduced or flexible schedules, phased retirement, advisory appointments, project-based work, return-to-work programs, workplace adaptation, modular reskilling, and technical expert tracks that do not require movement into general management. The 2024 social insurance reform changes the formal retirement horizon for affected groups, but the productive effect will depend on job design and employer demand (GOSI, 2024). Particular attention is warranted for maintaining women's career continuity through mid- and late-career stages, because today's retention determines the size of the future senior female workforce.

B. Define scarcity at the occupation–task–experience level

Selection mechanisms for international talent can move beyond broad occupational titles or educational credentials. Saudi Arabia can further refine the identification of capability shortages along these lines. As an example, National Labor Observatory (NLO) foresight, vacancy duration, wage developments,

licensing information, employer surveys, project pipelines, and linked employment histories (NLO, n.d.) can be combined to determine whether a constraint affects an entire occupation or a narrower combination of tasks, technologies, sectors, locations, and required experience.¹ This mechanism would also recognize economically valuable experience in lower-paid occupations in which safety, quality, reliability, or task-specific knowledge is particularly important.

The resulting evidence could support more targeted decisions concerning international recruitment, labor mobility, training, nationalization, and capability development. Notably, scarcity changes with technology, investment cycles, project demand, and the development of domestic labor supply. Periodically updated assessments offer greater flexibility than a rigid permanent shortage list. The value of this approach lies in establishing a common and measurable basis for distinguishing genuine capability constraints from vacancies arising from wages, working conditions, recruitment practices, or temporary demand (NLO, n.d.).

C. Link facilitated access and retention to demonstrated capability and capability transfer

Facilitated entry and longer-term retention can be linked to evidence that an expatriate possesses capabilities that are both valuable and scarce in the Saudi labor market. International skilled-migration regimes—including employer-sponsored routes such as the United States' H-1B program and criteria-based systems elsewhere—commonly consider occupational demand, qualifications, relevant experience, licensing, salary, employer sponsorship, and demonstrated achievement. Saudi selection mechanisms could similarly assess the depth and relevance of expertise through professional credentials, responsibility for complex projects, technical or research outputs, managerial scope, and alignment with an identified capability shortage. Appropriately selected high-skilled migrants can contribute to innovation and productivity through their expertise, professional networks, and experience with advanced technologies and organizational practices (OECD, 2014; Hunt and Gauthier-Loiselle, 2010; Peri, Shih and Sparber, 2015).

Selection based on capability could be complemented by practical mechanisms for capability transfer. Firms receiving facilitated access to scarce specialists or supporting their longer-term retention could identify the capability being brought into the Kingdom, the Saudi employees or teams working alongside the specialist, and the channels through which expertise can be shared, including joint projects, mentoring, technical supervision, applied training, and process documentation. Progress could be assessed through independently completed tasks, professional credentials, reduced reliance on external experts, project performance, and progression into higher-responsibility roles. Capability and transfer potential are related but not identical: high-caliber specialists may bring greater knowledge, but transfer also depends on workplace roles, incentives, and opportunities for sustained interaction. The objective is therefore not immediate one-for-one replacement, but ensuring that extended access contributes, where feasible, to a cumulative Saudi capability base (Burmeister and Deller, 2016; OECD, 2024).

¹ The NLO is presented here as an example of an existing institution capable of supporting this mechanism through analysis and policy advice; other entities within the labor market ecosystem could perform complementary analytical roles. The example illustrates that the proposed approach can be developed through institutions and capabilities already present in the Kingdom, rather than requiring an entirely new institutional structure. The resulting evidence could inform policy development, regulation, and implementation by MHRSD and other relevant government entities within their respective mandates.

D. Retain scarce expertise through mobility, residency stability and family attachment

Experienced specialists are more likely to remain when they can move toward productive matches and make credible long-term plans. Appropriately governed mobility through existing labor market institutions can keep valuable capability inside Saudi Arabia when one project or contract ends, while Premium Residency and special-talent pathways can provide continuity for carefully selected groups (MHRSD, 2020; MHRSD, 2025; PRC, 2026). School continuity, spouse employability, healthcare, housing, and professional recognition form part of the same retention decision. These arrangements remain compatible with Saudization when eligibility is transparent, occupationally targeted, and linked to evidence of complementarity rather than nationality alone.

Saudi universities provide an additional locally embedded pipeline. KAUST's international graduate and research model and KFUPM's expanding international scholarship programs bring talented students and researchers into Saudi networks before their mature careers (KAUST, 2026a; KAUST, 2026b; KFUPM, 2026a; KFUPM, 2026b). Selective transitions into research, entrepreneurship, or private-sector employment in demonstrated shortage fields can convert this educational presence into domestic capability at relatively low integration cost.

E. Use pilots and case studies to understand when complementarity occurs

The relationship between expatriate experience and Saudi capability development can be examined through focused pilots and firm-level case studies rather than translated immediately into a universal scheme. Firms already recruit talent by weighing expected productivity, cost, scarcity, regulatory requirements, Saudization targets, and future business needs. In a young labor market, these decisions may also create complementarity when experienced expatriates undertake specialized or senior functions while Saudi employees acquire experience and progress into more complex roles. However, the scale and conditions of this complementarity remain empirical questions. Carefully selected studies in experience intensive sectors could examine how firms combine Saudi and expatriate talent, which workplace arrangements support knowledge sharing, and whether longer expatriate tenure is associated with stronger Saudi career progression (Erumban and Al-Mejren, 2024; OECD and ILO, 2018).²

Linked administrative data could support these studies by tracking vacancy duration, expatriate retention and mobility, Saudi tenure and wage progression, professional credentials, movement into complex functions, promotion into technical or supervisory roles, and reliance on external consultants. Entities in the Kingdom such as NLO could contribute to this evidence base by integrating foresight, vacancy, wage, mobility, graduate, and occupational data in collaboration with employers and other relevant institutions. Comparisons across firms, projects, occupations, and sectors could then identify where complementarity and capability transfer appear to occur and where expatriate and Saudi employment instead remain segmented or substitutable. The purpose would be to learn from actual firm behavior and develop a stronger empirical understanding before considering broader policy applications. Transparent criteria, contractual protection, and common professional standards would remain important to the credibility of the analysis and to effective labor market governance (ILO, 2024; OECD and ILO, 2018).

² Government and semi-government projects delivered through contractors would provide a particularly relevant setting for such case studies because they allow the respective contributions of external specialists, directly employed expatriate professionals, and Saudi counterparts to be examined across the project cycle.

Conclusion

Saudi Arabia's demographic structure provides both an advantage and a transitional constraint. Its young national population can support growth over a long horizon, but a large share of the Saudi workforce is still accumulating the tenure and task specific knowledge required for advanced technical, scientific, managerial and institutional functions. The more immediate constraint identified in this brief is the relatively thin active senior tier. Saudi participation falls sharply at ages 55 and above, while the non-Saudi population is concentrated in the core working ages and also becomes much smaller at older ages.

Expatriate migration has partly filled this experience gap, supplying both routine labor and important concentrations of specialized capability. In the brief, age is used only as a proxy and naturally cannot be treated as a direct measure of skill, and expatriate employment is not uniformly complementary to Saudi employment. The relevant distinction is whether a worker possesses scarce, verified experience and whether the surrounding organization uses that experience to expand production, reduce failure and develop Saudi capability. This applies to senior professionals and to experienced workers in less highly paid occupations where task-specific knowledge contributes to safety, quality, and productivity.

The central policy choice is therefore not between Saudi and expatriate talent. It is how to extend productive Saudi careers while selectively retaining international experience during a period in which demand for advanced capability is growing faster than it can be produced domestically. For nationals, this means sustained employment, access to substantive functions, continued learning, career continuity, and viable late-career roles. For selected expatriates, it means mobility toward productive matches, sufficient residency stability to support longer horizons, and organizational arrangements that translate co-presence into measurable transfer.

Success would ultimately be visible in the changing structure of Saudi careers. More Saudi professionals would perform complex tasks independently, remain economically active for longer, accumulate sector- and organization-specific knowledge, and progress into senior technical and leadership positions. Expatriate specialists would be retained where their experience fills a demonstrated gap and would work within systems that leave stronger local capability behind. Under these conditions, selectively retained international expertise can help address the near-term capability requirements identified through the demographic evidence presented in this brief, while the domestic stock of experienced Saudi professionals develops and expands over time.

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Publication Reference: Citations and quotations should always include either the long or the short reference provided here. Generally, the long reference should be used but in exceptional cases (e.g., not enough room), the short reference may be used.

Long reference: Mehmet Ali Soytaş, “Demographics, Skills, and the Role of Expatriate Talent in Saudi Arabia's Labor Market: From Labor Substitution to Strategic Complementarity under Vision 2030”, Policy Brief No. 36/2026, Gulf Labour Markets, Migration, and Population (GLMM) Programme, <https://gulfmigration.grc.net>.

Short reference: M. A. Soytaş, “Demographics, Skills, and the Role of Expatriate Talent in Saudi Arabia's Labor Market: From Labor Substitution to Strategic Complementarity under Vision 2030”, Policy Brief No. 36/2026, GLMM.

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