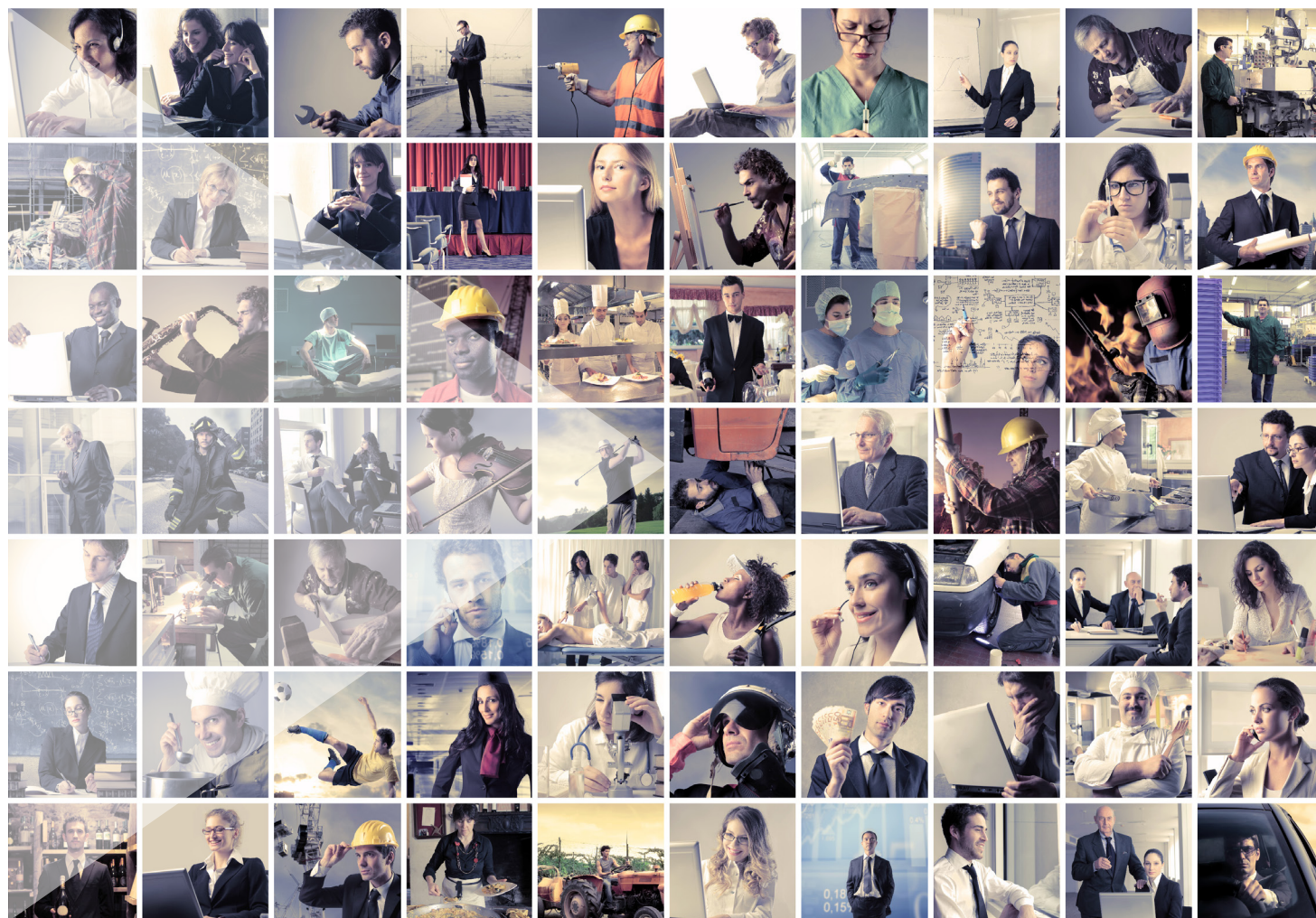


Executive Summary

The Industry Gender Gap

Women and Work in the Fourth Industrial Revolution

January 2016



Executive Summary: The Industry Gender Gap

Technological, socio-economic, geopolitical and demographic developments and the interactions between them will generate new categories of jobs and occupations while partly or wholly displacing others. In addition, as whole industries adjust and new ones are born, many current occupations will undergo a fundamental transformation. As the Fourth Industrial Revolution takes hold in different industries and job families, it will affect female and male workers in distinct ways. By their very nature, many of the major drivers of transformation currently affecting global industries have the potential to enable the narrowing of industry gender gaps that continue to be widespread in most industries today, aggravating hiring processes and future workforce planning due to a more restricted talent pool. As industries prepare to adapt to disruptive change, tackling gender gaps could also unlock new opportunities for growth.

The *Future of Jobs Report* seeks to understand the current and future impact of key disruptions on recruitment patterns and gender gaps in different industries and countries. It does so by asking the Chief Human Resources Officers (CHROs) of today's largest employers to imagine how jobs in their industry and women's participation in the workforce will change up to the year 2020.

THE BUSINESS CASE FOR CHANGE

In addition to a values-based case for gender equality, there is an accompanying economic imperative for including women more fully into society and the workplace and women's participation in the workforce is no longer perceived as a social issue alone, but also as a business issue—costing women, companies and ultimately entire economies. Female talent remains one of the most under-utilized business resources, either squandered through lack of progression or untapped from the onset. Although women are, on average, more educated than men globally and now participate more fully in professional and technical occupations than 10 years ago, as of today, their chances to rise to positions of leadership are only 28% of those of men. Women continue to make up less of the labour force overall than men, and where they participate in the formal economy their earnings for similar work are lower.

Our respondents perceive a wide range of rationales for promoting workplace gender parity, varying with the specific situation of different industries. Overall, the most frequently cited reason for promoting female talent is the ethical imperative “fairness and equality”, which was chosen by 42% of respondents. Over a fifth of companies each are further motivated by a range of rationales more closely tied to the success of their business—enhancing innovation and

Methodology

The *Future of Jobs Report*'s research framework has been shaped and developed in collaboration with the Global Agenda Council on Gender Parity and the Global Agenda Council on the Future of Jobs, including leading experts from academia, international organizations, professional service firms and the heads of human resources of major organizations. Our analysis groups job functions into specific occupations and broader job families, based on a streamlined version of the O*NET labour market information system used by researchers worldwide.

The dataset that forms the basis of the *Report* is the result of an extensive survey of CHROs and other senior talent and strategy executives from a total of 371 leading global employers, representing more than 13 million female and male employees across 9 broad industry sectors in 15 major developed and emerging economies and regional economic areas.

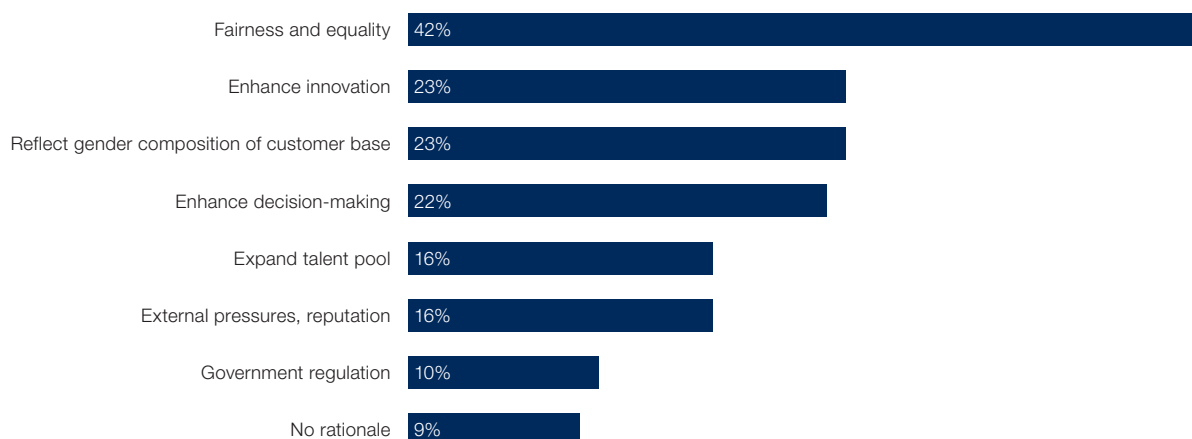
decision-making or reflecting the gender composition of their customer base.

Currently, women make up the majority of those enrolled in university in nearly 100 countries. Despite this fact, “expanding the talent pool” lags behind as a perceived rationale for promoting gender parity. This may be because women's ascendance in higher education is a relatively recent phenomenon among junior cohorts of many populations and company perceptions have not kept pace with the changing reality of the composition of the talent pool around them. Employers in the Information and Communication Technology and Mobility industries nevertheless find this rationale especially convincing. In Information and Communication Technology, a sector which struggles with talent shortages, no less than 37% of companies regard enhancing women's workforce participation as an opportunity for expanding the talent pool. Across all industries approximately 20% of respondents also reported they were feeling external pressures to address gender imbalances, either by media scrutiny and public opinion or by government regulation.

There is a strong correlation between the gender composition of companies' customer base and the gender composition of their workforce across various industries. For example, on average, just over two in five respondents from the Financial Services & Investors sector emphasize reflecting their customer base as one of their main rationales for promoting gender parity. With good reason, too: globally, women controlled 64% of household spending and 30

Significance of rationales for gender parity, industries overall

Share of respondents stating rationale, %



Source: Future of Jobs Survey, World Economic Forum.
Note: Names of rationales have been abbreviated to ensure legibility.

Gender gap and female share of customer base, by industry

Share of female workforce, %

Industry group	Share of women	Gender wage gap	Relative ease of recruitment		Business to business		Business to consumer		Business to government	
			Current	2020	Current	2020	Current	2020	Current	2020
Industries Overall	30%	32%	-0.74	-0.11	25%	33%	31%	33%	21%	27%
Basic and Infrastructure	16%	35%	-0.99	-0.20	16%	28%	26%	30%	18%	24%
Consumer	33%	49%	-0.63	-0.35	14%	18%	47%	49%	11%	15%
Energy	19%	31%	-1.08	0.14	18%	23%	26%	26%	18%	19%
Financial Services & Investors	36%	38%	-0.78	-0.11	25%	34%	39%	41%	19%	29%
Healthcare	51%	15%	-0.09	-0.10	50%	43%	57%	57%	60%	60%
Information and Communication Technology	24%	25%	-0.91	-0.39	25%	33%	24%	30%	17%	21%
Media, Entertainment and Information	37%	18%	-0.67	0.28	20%	32%	48%	44%	15%	19%
Mobility	19%	39%	-0.92	-0.04	21%	30%	21%	27%	16%	19%
Professional Services	40%	22%	-0.39	-0.09	31%	45%	32%	30%	20%	28%

Source: Future of Jobs Survey, World Economic Forum.
Note: Relative ease of recruitment measured on a qualitative -2 ("much harder") to +2 ("much easier") scale. Gender wage gap refers to share of responses in the affirmative.

trillion dollars of consumer spending in 2013—and this figure is predicted to rise by almost a third by 2018. As women's workforce participation rises, they will gain further purchasing power through increased lifetime disposable income. The proportion of business-to-consumer (B2C) and business-to-business (B2B) clients who are women should therefore be expected to rise, as reflected in our respondents' projections. Expected growth of B2C clients is lower but starting from a higher base.

Perhaps unsurprisingly, the *Report* also finds that tapping into the female talent pool is increasingly regarded as a prominent and promising area for workforce planning. More than a quarter of companies surveyed identified female talent as a key feature of future workforce strategy. Similarly, women's rising labour force participation and economic power as consumers is increasingly recognized as a key driver of change across several industry sectors

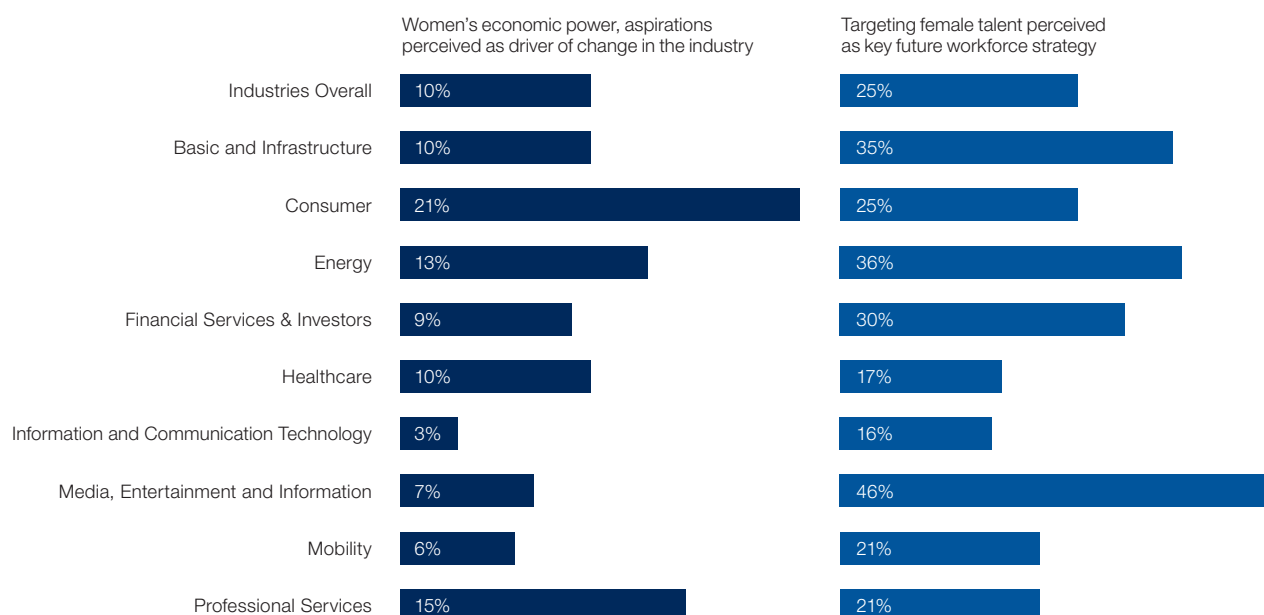
and one that is highly correlated with expected employment growth—an unambiguously positive trend in a somewhat turbulent landscape of technological, demographic and socio-economic change.

GENDER GAPS IN THE TALENT PIPELINE

While national cultures and policies shape women's participation in national workforces, sectoral cultures and practices also play a significant role. Today's leaders have inherited company and industry cultures in which women participate to varying degrees. Across all industries, women currently make up on average 33% of junior level staff, 24% of mid-level staff, 15% of senior level staff and 9% of CEOs. Having invested in women as they enter in junior positions, employers appear to frequently lose their investment by failing to retain talent up the ladder. The industries with the lowest junior level intake also expect more dramatic

Gender parity as part of future workforce strategy

Share of respondents agreeing with statement, %



Source: Future of Jobs Survey, World Economic Forum.

Women's workforce participation, by industry

Share of female workforce, %

Industry group	CEOs		Board members		Senior roles		Mid-level roles		Junior roles		Line roles		Staff roles	
	Current	2020	Current	2020	Current	2020	Current	2020	Current	2020	Current	2020	Current	2020
Industries Overall	9%	28%	15%	25%	24%	33%	33%	36%	30%	34%	35%	39%		
Basic and Infrastructure	2	35	9	17	13	21	22	29	14	23	20	27		
Consumer	10	21	16	24	26	33	33	37	31	34	37	41		
Energy	0	32	11	20	19	27	24	27	19	25	22	30		
Financial Services & Investors	9	19	20	30	33	40	43	43	35	39	42	43		
Healthcare	6	—	15	28	31	44	39	46	44	49	41	48		
Information and Communication Technology	5	19	11	20	21	29	32	34	23	32	33	38		
Media, Entertainment and Information	13	22	25	33	25	32	35	36	38	43	47	46		
Mobility	9	17	13	21	21	30	28	33	25	31	34	36		
Professional Services	9	23	22	34	33	40	39	43	44	44	44	46		

Source: Future of Jobs Survey, World Economic Forum.

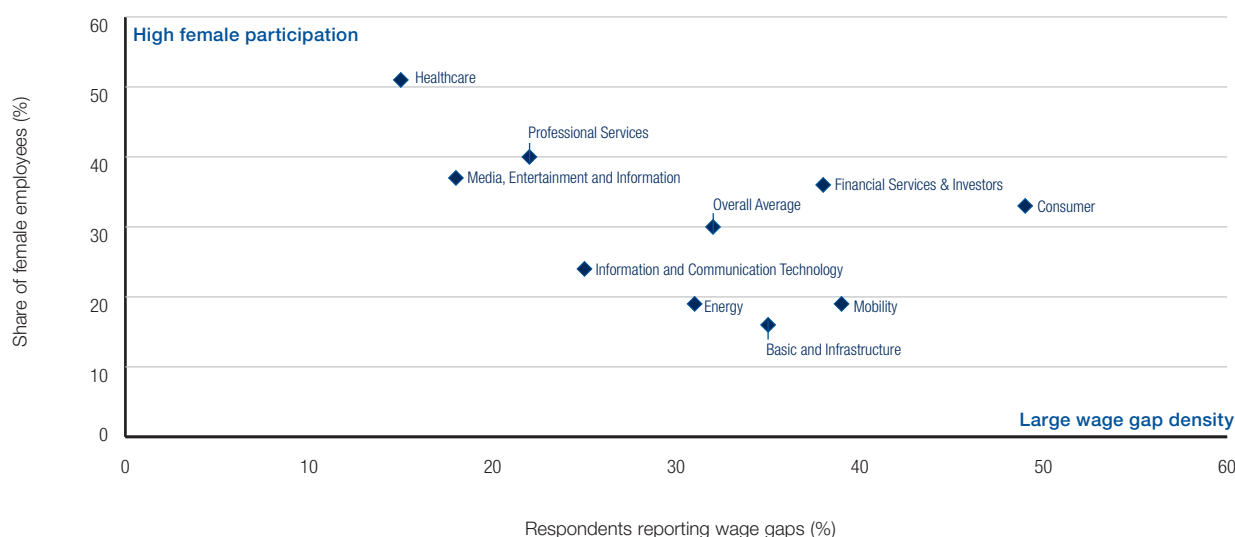
drop-offs along the talent pipeline, with low intake at the junior level translating to similar underperformance later on.

The participation of women in line and staff roles highlights some of the additional barriers to progressing to top level positions. Women are under-represented in line roles in the Mobility, Information and Communication Technology, Energy and Basic and Infrastructure sectors, with line roles more likely to equip women with the skills and experience that would prepare them for senior positions.

Projecting their figures for the year 2020, companies expect some improvement, spread unevenly across different industries. On average, responding CHROs predict that the gender composition of today's junior roles will be reflected in 2020's mid-level roles, and that the gender breakdown of

today's mid-level roles will similarly carry through to 2020's senior roles. Across industries, there are expectations of a 7 to 9 percentage point increase in the share of women in mid-level roles by 2020 and an 8 to 13 percentage point increase in senior roles. This suggests an expectation that the workforce strategies employed to promote gender parity will be successful in retaining and promoting the majority of incoming female talent, against past experience. The *Report* also finds that companies are focusing primarily on progressing women through the pipeline to avoid losing already developed or developing talent. Few industries are targeting strong increases when it comes to hiring women into junior and entry level roles.

Gender wage gap and women's participation, by industry



Source: Future of Jobs Survey, World Economic Forum.

Across all industries, companies reported that they found women harder to recruit, with the reported ease (or in this case, difficulty) of recruiting women directly proportional to the existing gender composition of the industry. Persistent gender wage gaps are reported across all industries, even in industries where female participation is comparatively high.

BARRIERS TO CHANGE

The *Report* finds that views concerning the barriers to women's workforce participation vary by industry and often reflect different industry cultures in addition to overarching economic and societal factors.

While in nearly all industries and geographies there has been a marked shift away from deliberate exclusion of women from the workplace, there continue to be cultural beliefs that lead to unconscious biases. This includes perceptions that successful, competent women are less "nice"; that strong performance by women is due to hard work rather than skills; and assumptions that women are less committed to their careers. In addition, especially in well-established, older organizations, workplace structures that were designed for a past era still, often unwittingly, favour men. Additionally, women's historically low participation in the labour market means they have relatively fewer role models to look towards across all industries. Research suggests that women have a poor perception of senior roles and lack a clear line of sight as to how senior leadership positions might help them achieve their objectives, lacking role models who can reveal the trade-offs and benefits they bring. Women's confidence and aspirations are seen as another barrier. Women are less likely to want a top job—citing the stress or pressure of the role as a deterrent. An often cited barrier is a lack of qualified incoming female talent in specific fields, especially in STEM education, where women currently

make up only 32% graduates across the world. Finally, where each industry stands specifically is often affected by how recently an industry has improved its gender balance. Given that career choices are disproportionately affected by prior experience and bias, traditionally male dominated professions often find it difficult to attract women.

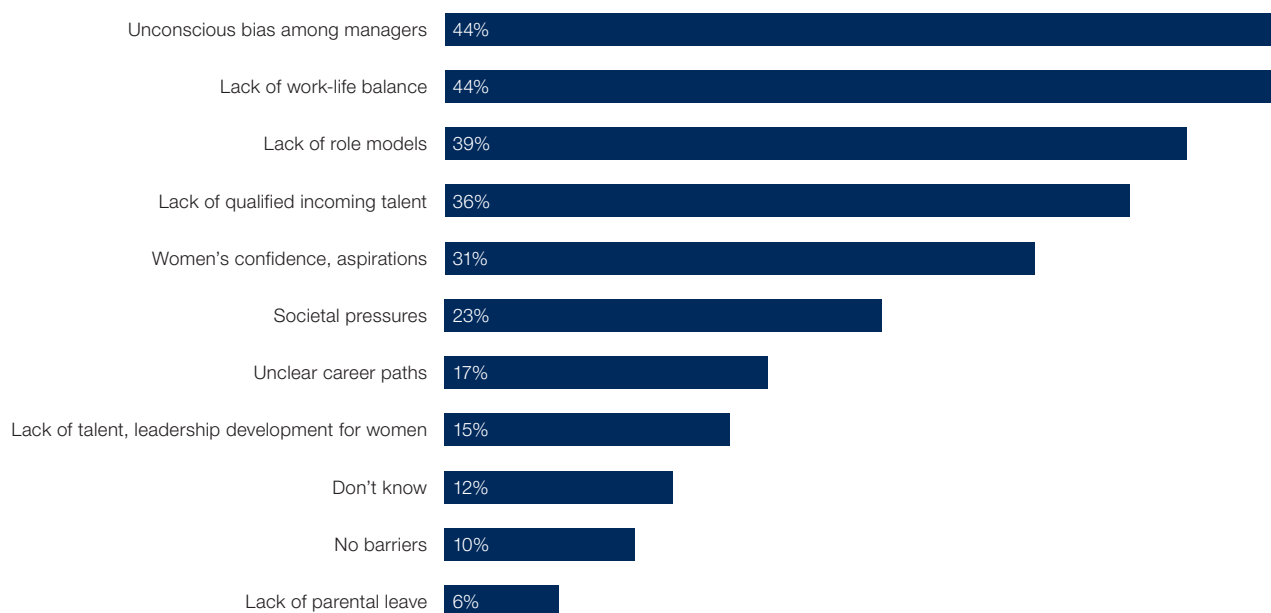
Across all industries, unconscious bias among managers and lack of work-life balance are cited as the two top barriers to women's workforce integration over the 2015–2020 period. The proportion of employers reporting these two factors as their main concern is equal—44% for each. Around 36% of respondents also voiced a concern about the availability of qualified talent, in particular employers in the Energy, Information and Communication Technology and Mobility industries. This is reflected in their low current share of female junior staff. The Information and Communication Technology industry sees this issue as their main barrier to a more gender balanced workforce. Basic and Infrastructure has a similarly low number of female junior staff, but there is less emphasis by respondents on incoming talent qualification, with unconscious bias by managers instead cited as the top concern. Financial Services & Investors and Professional Services place more emphasis on women's own aspirations as a barrier, with Professional Services seeing it as the main limiting factor for promoting women's talent. By contrast, few sectors cited lack of parental leave as an issue.

WOMEN AND WORK IN THE FOURTH INDUSTRIAL REVOLUTION

As the Fourth Industrial Revolution takes hold in different industries and job families, it will affect female and male workers and the dynamics of the industry gender gap in manifold ways. By their very nature, many of the current expected drivers of change have the potential to enable the narrowing of industry gender gaps. Household work

Significance of barriers to gender parity, industries overall

Share of respondents reporting barrier, %



Source: Future of Jobs Survey, World Economic Forum.

Note: Names of barriers have been abbreviated to ensure legibility.

Gender Gap, by job family

Job family	Share of women	Gender wage gap	Relative ease of recruitment	
			Current	2020
Architecture and Engineering	11%	27%	-1.18	-0.27
Arts, Design, Entertainment, Sports and Media	48%	12%	-0.21	0.07
Business and Financial Operations	43%	30%	-0.42	-0.16
Computer and Mathematical	23%	28%	-0.91	-0.13
Construction and Extraction	10%	48%	-1.48	-0.64
Installation and Maintenance	8%	24%	-1.43	-0.20
Management	25%	34%	-0.84	-0.03
Manufacturing and Production	20%	32%	-0.99	-0.12
Office and Administrative	54%	36%	0.21	0.31
Sales and Related	41%	35%	-0.42	-0.03

Source: Future of Jobs Survey, World Economic Forum.

Note: Relative ease of recruitment measured on a qualitative -2 ("much harder") to +2 ("much easier") scale. Gender wage gap refers to share of responses in the affirmative.

could be further automated, relieving some of the current dual burden women face and allowing women to put their skills to use in the formal economy. Changes to what have traditionally been men's roles in the workforce will also reshape the division of labour at home. Similarly, many respondents and industry observers agree on the need to rethink work, taking a holistic approach to workforce planning. Harnessed in the right way, the emergence of new flexible working patterns and other similar trends could result in a more gender balanced workplace.

However, as disruptive change comes to business models, jobs are displaced and a new labour market materializes out, there is also a risk that new trends might sustain or worsen other existing gendered inequalities.

The *Future of Jobs Report* finds that a large share of the labour market disruptions identified by our respondents are likely to be concentrated in some of the job families with the largest share of female employees, such as Office and Administrative roles, as well as in job families with the highest gender imbalances, such as Architecture and Engineering and Computer and Mathematical roles as well as Manufacturing and Production.

From a net employment outlook perspective, expected absolute job creation and losses due to disruptive change over the 2015–2020 period are likely to amplify current gender gap dynamics.

The global workforce is expected to experience significant churn between job families and functions. Across

Net employment outlook by job family, 2015–2020

Employees (thousands, all focus countries)



the countries covered by the *Future of Jobs Report*, current trends could lead to a net employment impact of more than 5.1 million jobs lost to disruptive labour market changes over the period 2015–2020, with a total loss of 7.1 million jobs—two thirds of which are concentrated in routine white collar office functions, such as Office and Administrative roles—and a total gain of 2 million jobs, in Computer and Mathematical and Architecture and Engineering related fields. Manufacturing and Production roles are also expected to see a further bottoming out but are also anticipated to have relatively good potential for upskilling, redeployment and productivity enhancement through technology rather than pure substitution.

In absolute terms, men will face nearly 4 million job losses and 1.4 million gains, approximately one new job created for every three jobs lost, whereas women will face 3 million job losses but only 0.55 million gains—more than five jobs lost for every job gained. According to these predictions, men will lose more than 1.7 million jobs across the Manufacturing and Production and Construction and Extraction job families, but are set to gain over 600,000 jobs in Architecture and Engineering and Computer and Mathematical functions. Women will only lose 0.37 million jobs in these two male-dominated job families but are set to gain little more than 100,000 jobs in Architecture and Engineering and Computer and Mathematical functions if current gender gap ratios persist over the 2015–2020 period—nearly one new STEM job per

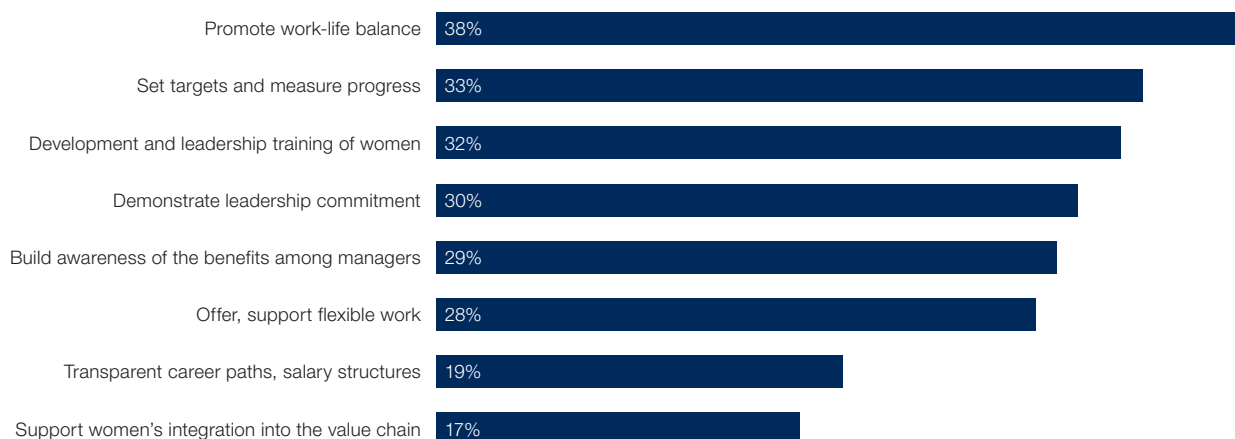
four jobs lost for men, but only one new STEM job per 20 jobs lost for women.

The data therefore suggests that if current industry gender gap trends persist and labour market transformation towards new and emerging roles in computer, technology and engineering-related fields continues to outpace the rate at which women are currently entering those types of jobs, women are at risk of losing out on tomorrow's best job opportunities while aggravating hiring processes for companies due to a restricted applicant pool and reducing the diversity dividend within the company.

The data also contains some encouraging signs that current trends need not continue. As traditionally male-dominated job families take on newfound importance and applications in industries that previously housed few such roles but have a strong track record of employing, retaining and leveraging female talent, the current culture may drive future recruitment efforts in new roles. Indeed, the *Report* finds that companies who report that they are confident that they are on the right track in their approach to preparing for impending disruptive change and that workforce strategy is perceived as a priority by their top management are over 50% more likely to be targeting female talent as a key component of their future workforce planning. More deliberate efforts will be needed to ensure that the full talent pool of women is educated, recruited and promoted, over time creating novel competitive advantages and a virtuous cycle around a company's ability to address skills shortages by targeting female talent.

Significance of strategies for women's workforce integration, industries overall

Share of respondents pursuing strategy, %



Source: Future of Jobs Survey, World Economic Forum.

Note: Names of strategies have been abbreviated to ensure legibility.

APPROACHES TO CLOSING THE GENDER GAP

In order to leverage the benefits of gender diversity, companies need to take a holistic approach, starting at the top. Actively managing talent rather than passive commitment has been shown to lead to better returns. Overall, 53% of the *Report's* respondents consider promoting women's participation as a priority item on their organization's senior leadership's agenda and 58% are confident about the efficacy of their current measures undertaken in this regard.

It is important to emphasize that interventions to promote gender parity do not work as a checklist of actions that will each independently produce results. They must be accompanied by a holistic set of priorities and long-term commitments, and by a deep understanding of the corporate, industry, and cultural context, as well as the organizational culture and local policy environment. While some of the required transformations in corporate practices will entail adaptation in the short term by families and companies, in the long term, the subsequent expansion of opportunities for women has the potential to transform the economies, societies and demographics of countries as a whole.

The World Economic Forum's online *Repository of Successful Practices for Gender Parity* pools information on the practices that have been successfully used in leading companies worldwide to close gender gaps at the company level, as well as along the companies' supply chain and surrounding communities. The repository suggests six dimensions around which to focus an organization's gender parity efforts.

- **Measurement and target setting:** Achievable, relevant recruitment and retention targets at all levels, with an embedded accountability mechanism, are critical. Developing a disaggregated database can help to evaluate the causes of gender imbalances and track progress. Transparent salary bands to track and address male and female salary gaps are

additional useful tools to understand the status quo in organizations.

- **Mentorship and training:** Companies have benefitted from programmes that promote guidelines on the value of diversity as an underlying culture of the organization, and impart knowledge on how to manage a more diverse workforce and how to attract, retain and promote female talent. These training programmes, for both men and women, can be relevant for shaping an environment within the broader employee base for women to successfully lead. A repositioning of the human resources function beyond a focus on systems and administration to talent development and training can help address specific roadblocks for women, in addition to better overall talent management.
- **Awareness and accountability:** The focus of many companies on building awareness indicates that the case for change still needs to be built to make progress. Accountability of the senior management and transparency of career paths and opportunities have proven to be effective practices. Ensuring that management policies, processes, systems and tools do not harbour gender-based discrimination, as well as enhancing the understanding of unconscious biases can, also make inclusive leadership more tangible.
- **Work environment and work-life balance:** Women are often the primary caregiver for both children and the elderly in most countries. Ensuring smooth on- and off-ramping and appropriate childcare options, and developing guidelines on implementation of work-life balance policies and mentoring for women going through a transition are important levers to ensure a sustained career progression towards management. For those companies that already offer parental leave, flexible working hours and other work-life balance

programmes, the next steps lie in accelerating their use and acceptance by both female and male employees.

- **Leadership and company commitment:** Visible leadership by the chief executive and top management on supporting women in management has proven to be one of the most important levers for progress in achieving gender diversity in a corporate context. This includes concrete and symbolic actions by top management and, in many cases, establishment of a position or department to lead diversity efforts. Regular communications by senior management on gender equality have been found to be critical.
- **Responsibility beyond the office:** Many companies have leveraged the opportunity to exercise external influence along the value chain, including diversity training for suppliers, distributors and partners and training to support women-owned businesses in the organization's value chain. External influence can also be exercised by ensuring gender neutrality in advertising, engaging girls and young women to display possible career paths and developing partnerships with gender parity-focused civil society and public sector initiatives.

Beyond individual company practices and challenges, it is clear that there are specific and common gender gap challenges within industries. This is thus an area ripe for intra-industry collaboration and for improved public-private collaboration, to balance both public and business interest. Such collaborations and partnerships are currently relatively rare but there are emerging experiments that indicate the greater efficiency for business and improved societal outcomes are possible through such approaches.

As a core component of the World Economic Forum's Global Challenge Initiative on Gender Parity, the Industry Gender Gap project aims to bring specificity to the upcoming disruptions to employment and the world of work and its implications for women in the workplace—and to stimulate deeper thinking and targeted action from businesses and governments to manage this change. The 2020 focus of the Report was chosen so as to be far enough into the future for many of today's expected trends and disruptions to have begun taking hold, yet close enough to consider adaptive action today, rather than merely speculate on future risks and opportunities. At the World Economic Forum, the industry analysis presented in the Report will form the basis of dialogue with industry leaders to address industry gender gaps, while the country and regional analysis presented in the Report will also inform regional Gender Parity Taskforces.

The moral case for gender equality has, in the most part, been won. The business and economic case is also increasingly understood. The Fourth Industrial Revolution now presents an unprecedented opportunity to place women's equal participation in the workplace at the heart of preparations for the shifts to come.



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