The Future of Work discourse sees two narratives for women: an optimistic one emphasizing a chance in the platform economy and digitalisation and a counter narrative foreseeing a reproduction of obstacles.

The global pressure to reduce production costs drives the feminisation of labour, leaving women at the bottom of the global value chain.

Postmodern feminists see the digital economy as a chance to free women from prevailing gender stereotypes; others fear an aggravation of inequalities.
LABOUR AND SOCIAL JUSTICE

FEMINIST VISIONS OF THE FUTURE OF WORK

ASIA
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INTRODUCTION

Work produces not just economic goods and services but also social and political relations and identities. In recent years, numerous books, articles, and conferences discuss the likely impacts of the Fourth Industrial Revolution or 4IR for the ‘Future of Work’ (FoW). Some accounts, particularly those from technology companies, are essentially optimistic, celebrating the new productivity and efficiency gains that will accompany the adoption of new technologies and a possible post-work future. Others, particularly governments and economists, are more cautious, pointing out a likely churn in the world of work, where the degree of technological unemployment will depend on how quickly people are able to re-skill. Still others, particularly civil society activists and social scientists, highlight the inequitable distribution of technology gains, noting the many old and new socio-economic inequalities that are likely to be (re)produced. While these studies provide important and timely insights, most are focused on the experiences and trajectories of industrialised economies. Few consider the likely impact across the global south; fewer still consider the differentiated impact across social groups. Technology trajectories and their impact on the world of work are unlikely to be homogeneous, and will be shaped by local labour market realities, socio-cultural norms, and political and societal decision-making contexts.

The FoW may be thought of as a ‘policy concept’, that explores how various technological, socio-economic, geopolitical, demographic, cultural, and environmental trends are unfolding and interacting to recast labour markets and the socio-economic relationships sustaining and produced by them. The so-called ‘4IR’ may also be thought of in terms of a ‘socio-technical imaginary’. Socio-technical imaginaries are imagined forms of social life and social order that centre on the development or fulfilment of innovative scientific and/or technological projects. They are both descriptive of attainable futures and prescriptive of the kinds of futures that ought to be attained. Transitions toward 4IR and the FoW are thus not merely techno-scientific issues, but are inextricably bound up with questions of social arrangements and institutions, power and exclusion, and normative, societal preferences. Feminist perspectives provide an opportunity to identify and deconstruct these values, preferences, and social relations, and the structures of marginalisation and discrimination embedded within. In addition, feminist perspectives offer us ways in which to examine patterns and trends in the labour market, both as a field and body of theory and methodology, and how the differentials between men and women are created and could be closed. This becomes significant especially since economics and labour studies as disciplines have been shaped by those who have chosen to work in it, which historically and currently have been mostly men.

The FoW as a policy concept has emerged dominant primarily in certain industrialised economies and among specific social groups. In most parts of the world, the present of work is a more pressing worry - earlier industrial revolutions are still unfolding and work is associated with survival. While ideas of innovation and entrepreneurship are valorised in many dominant narratives on the FoW, these same ways of working are a result of necessity and precarity in many parts of the developing world. Dominant narratives, such those from governments and technology companies, that highlight the likely implications for growth and productivity, also tend not to distinguish between social groups; where women are considered, the emphasis is on economic participation and productivity, in isolation from social relations and identity.

While there is no identifiable scholarship in Asia that self-identifies as feminism and has articulated a view on the FoW, this brief attempts to identify some of the possible issues around the world of work that are uncovered from a feminist per-

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2 The catchphrase 4IR first came into use when Klaus Schwab, chairman of the WEF used it in 2015 in an article in Foreign Affairs. It has since then come to characterise a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres, collectively referred to as cyber-physical systems.
A clear limitation of this paper is that while feminist perspectives certainly extend beyond the subject of women, this paper scope is limited to narratives on women. Further, Asia is a continent of contrasts - with huge variations in natural resources, labour markets, and political cultures. Technology and work trajectories are thus unlikely to unfold in the same way across economies. To limit the scope of the study, this paper focuses on South Asian and East Asian regions, not West and Central Asia.

Asia is one of the fastest growing economic regions in the world, home to five of the world’s largest economies - China, Japan, India, South Korea and Indonesia. The distinctive feature of Asia’s growth has been the rapid transition away from agricultural economies. But the speed and trajectories of industrialisation have varied considerably. While the East Asian economies were able to transform themselves into export-oriented manufacturing hubs, experiencing high rates of growth and employment, one of the distinctive features of India’s growth has been a shift straight from agriculture to service-led growth without an expansion in manufacturing. These differences will certainly impact technology and work trajectories in these economies. Further, low levels of state investments in education, healthcare, and infrastructure, combined with political instability and regional tensions, has further resulted in the divergence between the economic prosperity of the East and South Asian regions. High levels of informality also characterise Asian labour markets, particularly in South Asia and the Association of Southeast Asian Nations (ASEAN) states. Wage workers account for less than half of all employment in four of the five ASEAN countries and the bulk of South Asia’s labour is engaged in the unorganised sector of the economy. High growth rates have also led to a reduction in absolute poverty across Asian countries; however, this has been accompanied by pockets of persistent poverty, income vulnerability and growing income inequality.

While Asia has made strides in advancing women’s empowerment and gender equality, significant challenges remain. A recent report by the World Economic Forum (WEF) suggests that if South Asia continues at its current rate of progress, it will take 1,000 years to close the economic gender gap. According to the Asian Development Bank (ADB), the labour force participation rate for females in East Asia averaged 64 percent, one of the highest in the world, while South Asia’s labour force participation rate is 31 percent compared to the global figure average of 51 percent. But the statistics down to the country level are drastically different. For example, Cambodia has a 79 percent female labour force participation rate, while South Korea’s labour force participation rate is at around 50 percent, and in Sri Lanka it is at only 30 percent.

By 2025, half the world’s population (4.3 billion people) will live in developing Asia amid a demographic transition to an ageing population. South Asia’s population will likely swell to 2 billion and East Asia’s to 1.5 billion. Asian giants India and China – respectively with 1.5 billion people and 1.4 billion people by 2025 – will continue to dominate. Southeast Asia is likely to hold about 700 million people by 2025, with over a third of this total living in Indonesia. How the future world of work unfolds in Asia will be relevant across the world.

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Global narratives on the impact of 4IR need to be localised and re-examined. This section outlines some of the key lines of discussion and narratives around work futures in Asia; it is worth highlighting that most of this scholarship originates in western geographies - universities, think tanks and consultancies.

In fact, conversations around digital technologies, automation, and the world of work are at a very nascent stage in India, and there are significant divergences within Asian countries. In larger economies, such as India and China, and those more integrated with global value chains, such as Bangladesh, the conversation is just starting, driven primarily by large international organisations, such as the World Bank and ILO; international consultancies, such as McKinsey and PwC; governments, particularly ministries for Industry Policy and Skilling; large technology companies and smaller startups; and industries or sectors most affected by automation, such as the garment sector. Much of the conversation is within a neo-liberal framework, emphasising the growth, productivity, and efficiency possibilities offered by new technologies. Further, the neoliberal dispositions of the dominant narrative lead it to valorise entrepreneurship, life-long learning, and up-skilling, shifting both responsibility and risk to the individual, rather than the state. The dominant narrative also does not distinguish impact across social groups, such as how men and women will be affected differently by automation, or the particular challenges for women to engage in entrepreneurial activities. The likely differences of impact for men and women is detailed in section 4, which explicitly focuses on how issues relevant for the future world of work are interpreted through a feminist lens.

Job displacement within specific sectors, such as in the IT industry in India or the garment industry in Bangladesh, has brought the issue to the attention of labor unions and workers. Further, there are a few examples of new expressions of labor unions being initiated - for example, in India, drivers on taxi hailing applications are trying to create their own unions. But, for the most part, in Asian economies, the current of work is a far greater focus than the future of work. It is thus hard to identify a distinct set of actors and their respective issues around the future of work. Therefore not surprising that actors and voices talking specifically about women in the future world of work are mostly absent. Conversations around women in the context of digitalisation are currently focussed more on their civil and political liberties - cybersecurity and online harassment, hate speech, and surveillance. India seems to have the most clear set of actors and issues around the FoW, but these are very few - It for Change, Tandem Research, Point of View, Feminist Approaches to Technology (FAT), and the Indian Institute for Human Settlements.

### AUTOMATION POTENTIAL AND ADOPTION

One of the key concerns is the impact of advanced automation on the job-market - displace or change the nature of existing jobs? A World Bank (WB) study estimates that the proportion of jobs threatened by automation in India is 69 per cent and 77 per cent in China. The International Labour Organisation (ILO) estimates that 56 per cent of jobs are at risk of being automated in the ASEAN-5 countries. These estimates are based on the technological feasibility of automating specific tasks within job or work types. Yet, automation potential and automation adoption should not be confused. While a high number of tasks might be technically automatable, the adoption of particular technologies will depend on a complex interplay of factors including the cost of labour; levels of education and skilling; legal frameworks for innovation; labour protection policies; availability of supporting infrastructure; and social and cultural norms that shape attitudes towards technological change and innovation. The relatively low cost of labour, compared with the cost of technological adoption, will make large scale technological adoption unlikely in the short run for many South Asian Economies. In India for example, manufacturing wages adjusted for productivity stand at an average of 5.25 US dollars, which is substan-

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tially less than the cost of robots. Equally, the availability of skilled labour will be a critical factor in determining the speed and scale of adoption in ASEAN countries. In Japan, on the other hand, cultural norms have shifted alongside technological transformation, and funeral homes for robots are a fast growing business.

**RE-SHORING AND DE-INDUSTRIALISATION**

In developed economies, recent improvements in automation is leading to reshoring, in which production is brought “back home” for labour-intensive manufacturing sectors, such as garment and footwear, electronics, and automotive, among others. This could pose a significant challenge for many Asian economies, whose growth has relied on leveraging the availability of abundance of low-cost labour to become manufacturing hubs for the world. As the cost of robots becomes increasingly competitive, there are concerns that this will result in the shrinking of the manufacturing sector and a subsequent loss in jobs. Southeast Asia is home to more than 630 million people and is a hub for several manufacturing sectors, including textiles, vehicles and hard disk drives. Of the 9 million people working in the region’s textiles, clothing and footwear industry, 64 percent of Indonesian workers are at high risk of losing their jobs to automation, 86 percent in Vietnam, and 88 percent in Cambodia. In the automotive and auto parts industry, more than 60 percent of salaried workers in Indonesia, and over 70 percent of those in Thailand face the risk of their jobs being displaced.

While countries like China and India are responding to such trends with policies such as ‘China Manufacturing 2025’ (MIC 2025) and ‘Make in India’ that focus on reorienting their development models towards their domestic markets, its impact is still unclear. Ernst in his analysis of China’s MIC 2025 plans estimates that China is likely to emerge as a major user and producer of robots although it still has a long way to go to develop a broad portfolio of innovation capabilities needed to enable the transition. In India, the manufacturing sector employs less than 12 percent of its labour force, raising concerns that India could experience premature de-industrialisation with the re-shoring of labour intensive industries, with significant impacts for the future employment prospects for its low-skilled labour force. In India, 550 robots are already at work in the Ford plant, 400 at Hyundai, and another 4200 in the factories of Honda and Suzuki.

**JOB-LESS GROWTH**

The deployment of emerging technologies is likely to result in increased productivity and efficiency across the organised manufacturing and service sectors for a number of Asian economies. Yet, there is a risk of job-loss growth, as fewer people are required to complete job requirements. This is already a concern among a number of Asian economies. Already in Indonesia, the number of adults over 15 years of age increasing by 3.1 million between 2014 and 2015, yet only 200,000 jobs were created in the same period. In the case of India, one million job seekers enter the labour market every month, employment generation in eight sectors slowed to a seven-year low in 2015. And, while the size of the “working age” population increased by 300 million, the Indian economy could employ only 140 million, suggesting a limited capacity to generate jobs. A recent report by the International Monetary Fund (IMF) similarly notes that while South Asia is one of the fastest growing regions in the world, employment growth is expected to fall well behind. In many Asian economies, the issue is also about the reduction in good jobs and increase in precarious form of work. While labour force participation is increasing in Cambodia and Vietnam, most jobs are of low-quality, in that they are at the bottom of the global value chain. In India, the growth in the platform economy is creating new forms of precarious and vulnerable employment, while accruing tremendous productivity gains for platform owners and customers alike.

**RE-SKILLING AND UP-SKILLING**

Jobs involving repetitive and routine low-skills jobs are likely to be most threatened by automation. New jobs that will be created will require higher-order skills, but will be fewer in number. A recent report suggests that 640,000 low-skilled service jobs in India’s Information Technology (IT) sector are at risk to automation while only 160,000 mid to high-skilled positions will be created in the Indian IT and Business Process Outsourcing (BPO) service sector. In Thailand, automation risk is particularly acute for approximately 1 million shop sales assistants. In Indonesia, about 1.7 million office clerks are highly vulnerable to automation. The dominant policy response points a race between education and technology...
and emphasises the need for re-skilling and up-skilling as a way to anticipate technological unemployment. But will people be able to skill fast enough? Will one generation be lost? A survey of employers in major industries in ASEAN countries showed that the demand for high-skilled workers far outgrows the supply; in India, over 70 percent of the population is un-skilled or low-skilled. Another view is that technological disruption is going to widen and entrench existing social and income inequalities - only those with adequate competencies and skills will be able to leverage new opportunities offered in a digital economy, particularly one that is marked by gender disparity; for the rest, the future of work will continue to be precarious.

ENTREPRENEURSHIP AND INNOVATION

Another key narrative is around new opportunities, innovation and entrepreneurship in the digital economy. In India for example, policy leaders have noted that while India ‘missed the boat’ on previous industrial revolutions, the 4IR is an opportunity for India to leapfrog existing development challenges. Such accounts are often techno-deterministic - assuming that technology is a quasi-natural and neutral force, that will necessarily lead toward social progress. A report on Vietnam’s strategies for dealing with automation and the 4IR suggests that Vietnam also see itself as suited to take advantage of the next technological revolution, specifically because of a young and growing population. Reports also suggest that the youth in ASEAN are highly optimistic about the impact of technology on their job prospects and incomes; some 52 per cent of the under-35 generation across South-East Asia said they believe that technology will increase the number of jobs available, while 67 per cent said they believe that technology will increase their ability to earn higher incomes.

PRECARIOUS WORK & INFORMALITY

Dominant neo-liberal narratives do not consider issue of informality - with narrative borrowed from industrialised economies, categories of informal and unorganised work do not receive significant policy attention. But a large proportion of the labour force in Asia is engaged in precarious work in the informal or unorganised sectors of the economy, characterised by low wages, poor working conditions, and limited or no access to formal social protection. Some recent scholars point out that the informal sector of the economy is unlikely to feel the impact of the large scale technological disruption because both people are either self-employed or in businesses of less than 5-6 where up-gradation is not viable. Alternatively, the growth of the platform economy in Asian economies could contribute to atlas the partial registration and formalisation of informal work; yet, without adequate policy intervention, the platform economy is also likely to reproduce precarity as workers are subject to algorithmic decision making processes and continue to lack access to formal social protection mechanisms.

WOMEN & ECONOMIC AGENCY

On women and economic agency in Asia, the narrative is split between those who think of technological progress in terms of equalising opportunities or those who highlight that it will accentuate and reproduce existing vulnerabilities and inequities. The platform economy for example is seen by some as creating new ways for women to access work. Critics on the other hand point out that is reproducing the gendered division of labour and creating a double burden for women. In many Asian economies there is already a significant gender gap in labour force participation; further, women typically occupy entry level and repetitive jobs that are most susceptible to automation. Thus, women could be particularly vulnerable in FoW. Further, lower levels of education and skilling, because of issues ranging from affordability to socio-cultural norms, puts girls at a disadvantage in terms of having the capacities to leverage new digital economy opportunities.

Valerie Cliff states that some Asian nations could lose more than 80 percent of their garment, textile and apparel manufacturing jobs, as “sewbots” replace humans in factories and that it is young women who comprise the majority of people dependent on jobs in these sectors, in countries such as Thailand, Vietnam, Cambodia and Malaysia. Further, female-dominated industries in the Indo-Pacific are expected to undergo substantial disruption through automation and digitisation (e.g. office and administrative work, and manufacturing and production).

Existing gender inequalities are stark and access to Informa- tion and Communication Technology (ICT) tools is skewed in

24 Ibid.
favour of men. Gurumurthy argues that while men experience barriers in accessing technology, including the impact of stereotypes, cultures and norms, women tend to experience all barriers more acutely due to structural inequalities and entrenched prejudices in many societies in the Global South (2004). For example, besides not being able to use the internet for instance, in certain regions social norms also result in women not wanting to use the internet because they believe content to be inappropriate and even offensive. Costs and affordability present another barrier for women who tend to have less disposable income or sources of finance than men. In South Asia region the gender gap in mobile phone ownership is 38 per cent, while in the East Asia and Pacific region it is 3 per cent. As digital technologies and skills are increasingly important in work tasks and accessing job opportunities, the digital divide is of central importance.


Feminist accounts of work have outlined the gendered division of labour and the distinction between paid work and unpaid household and care work. Indeed, from a feminist standpoint, work itself is to be conceived as a “site of gendering,” which plays a central role in the production and reproduction of gender identities. Fraser argues that “the gendered separation of social reproduction from economic production constitutes the principal institutional basis for women’s subordination in capitalist societies.” Indeed, the reason for women’s work to be placed outside the labour market was fundamental in capital accumulation, as it was the precondition for the wage male worker’s labour productivity. Globally, the waves of the feminist movements have sought to address ideological assumptions around capitalism and patriarchy (as well as racism, colonialism and imperialism) to expand the concept of ‘work’ to look at both reproductive and productive labour. Feminist narratives have shed light on the structures through which women have been subordinat-ed and marginalised in the labour market.

But a feminist analysis must also look beyond issues related to women. Feminist perspectives are about a larger politics of change that incorporates gender analysis as well as examining structures and layers of power that work to exclude and invisibilise communities and their narratives. Research from the feminist standpoint gives a distinctive point of view through which to understand marginalisation and power, as well as a route through which to ensure that those who are marginalised can becomes agents in the production of knowledge.

Most studies within feminist scholarship have mostly pertained to the experience women’s employment of the West and Europe. A number of writers and organisations in Asia work on issues of women and marginalisation in the world of work, and otherwise, though not all self-identify as belonging to a feminist tradition. Three key lines of argument or clusters of insights can be identified: the relationship between trade liberalisation and gender equality; the relegation of women to low-paid and precarious work, particularly within the informal sectors of the economy; and unrecognised and unpaid work.

A core concern for feminist scholarship in Asia is the link between economic globalisation, trade liberalisation and gender inequality. Referring to the East Asian export oriented growth story, Jayati Ghosh writes that women workers were preferred by employers in export activities primarily because of the inferior conditions of work and pay that they were usually willing to accept; they typically did not unionise or engage in other forms of collective bargaining to improve conditions, and did not ask for permanent contracts. Further, in the computer hardware and consumer electronics sectors, the nature of the assembly line work - repetitive and detailed, with an emphasis on manual dexterity and fineness of elaboration - was felt to be especially suited to women. In India as well, the feminisation of labour was driven by an attempt to provide the cheapest possible production for international suppliers. But women occupied the lowest and poorest paid parts of the global value chain and get nominal amounts from piece-rate work.

Thus, the increasing feminisation of labour during the decades of rapid economic growth in Asian economies should not be assumed to be simply improving the economic agency

32 Kathi Weeks, The Problem with Work: Feminism, Marxism, Antwork Politics, and Postwork Imaginaries. Ibid.
35 Barbara Littlewood, Feminist Perspectives on Sociology. (London: Routledge, 2016)
36 Prominent organisations that work on issue of women and labour/employment include Development Alternatives with Women for a New Era (DAWN), Gender at Work, The Asia Foundation, ASEAN Women Entrepreneurs Network (AWEN), Women in Informal Employment: Globalising and Organising (WIEGO) to name a few. Prominent organisations that work on issue of women and labour/employment include Development Alternatives with Women for a New Era (DAWN), Gender at Work, The Asia Foundation, ASEAN Women Entrepreneurs Network (AWEN) to name a few.
of women - it had both positive and negative effects on women and their economic empowerment. On the one hand, it meant greater recognition and remuneration of women’s work, and typically improved the relative status and bargaining power of women within households, as well as their own self-worth, thereby leading to empowerment. On the other hand, it also relegated women to low paid and precarious work. Further, an increase in paid employment also lead to an onerous double burden of work, as women continued to be involved in various forms of productive or reproductive activities, even if they are not recognised as “working” or paid for such activities.

Stephanie Seguino draws attention to how gender wage inequality in fact stimulated growth in Asia with Asian economies that disadvantaged women growing the fastest from 1975-1990. Low female wages spurred investment and exports by lowering unit labour costs, providing the foreign exchange to purchase capital and intermediate goods which raise productivity and growth rates. Seguino thus argues that “the gendered characteristics of Asian growth stand out in several regards. Young women, most of them single, have formed a large and rising share of the paid labour force since the adoption of export-oriented strategies.”

In China, the transition from a planned to market economy contributed to a drop in women’s participation in the labour force. Under the planned economy regime, an increasing proportion of women joined the workforce, pushing up employment rates. With the gradual transition to a market economy beginning in 1978, previously discarded ideas about gender made a comeback. Femininity was emphasised as a characteristic of women, and the thinking that “women belong at home” returned. Since the 1990s, the rate of women’s participation in the labour force declined much faster than that for men. In India, the numerical dominance of women workers is also characteristic feature of Export Processing Zones. In both Santa Cruz (Mumbai) and Madras (Chennai) Export Processing Zones (EPZs), women workers constituted 70-80 per cent of the work force. Virtually all studies on EPZs show that none of the provisions of the existing labour laws are actually met in most of the units operating in the major EPZs. Minimum wages are rarely if ever actually paid. In the case of Indonesia, one finds a traditionally high rate of labour participation by women, but primarily in the informal sector (57 per cent of Indonesia’s total female workforce). Further, women tend to earn twenty percent less than their male counterparts in the informal sector, especially in the garment industry, even though they are preferred labour on account of being more ‘obedient’ to their bosses.

In Bangladesh, we witness a significant growth in female employment in the last decade. This is attributed to the rise of ICT related jobs in corporate and service oriented businesses, as well as dedicated government policy. And increasing enrolment of women in education. However, low –paid vulnerable employment still persists in Bangladesh and these sectors mostly employ female workers who continue to earn less than their male counterparts and do not participate in decision-making processes within or outside his family.

Another key idea prevalent across feminist discourses on work is the emphasis on unpaid, unrecognised work. In India, for example, it should be noted that the definition of economic activity used by the National Sample Survey Office (NSSO) is quite restrictive, and does not include the full spectrum of economic activities defined in the United Nations (UN) System of National Accounts (SNA), even though it now tries to take account of involvement in some household enterprises such as farm activities or small-scale artisan production or transacted service provision. It therefore excludes a significant amount of unpaid or non-marketed labour within the household, especially by women, including the processing of primary produce for own consumption, basic domestic handicraft production, services such as cleaning, child care and so on, which are undertaken within the household and not marketed. This is true for most Asian economies - while they have different definitions of economic activity, care work and subsistence work is not included in calculations of GDP. This means there is a likely underestimation of economic activity within the household, as well as of the work participation rates especially of women. Further, once ‘women’s work’ is professionalised, there is practically a monopoly on it by men. The sexual division of labour ensures that women always end up as having to prioritise unpaid domestic work over paid work.

Feminists further highlight how a majority of women workers are in the unorganised sector, barely able to earn a subsistence wage. This is also true across other Asian economies. In Thailand, it has been estimated that as many as 38 per cent of clothing workers are homeworkers and the figure is said to be 25-40 percent in the Philippines. Further, Cooke points out that the informalisation of employment contracts, 


the absence of effective organising bodies outside the male
dominant formal sector and the fierce price competition in
manufacturing jobs make for further challenges for women
workers to bargain for higher wages, thus contributing to the
persistent gender wage gap. Institutional structures, persis-
tent patriarchal gender norms and stereotypes, and ineffect-
tive representation limit women’s bargaining power in the
labour market, holding down their financial reward as well as
career progression.47

47 Fang Lee Cooke, “Women’s Participation in Employment in Asia:
A Comparative Analysis of China, India, Japan and South Korea,”
download/pdf/51180983.pdf
Similar to mainstream discourse on automation, two extreme positions are often widely spread among feminists on technology and the FoW at a global level; in Asia, as mentioned earlier, there are almost no self-identified feminist voices talking about FoW. Yet, we can extrapolate certain continuities and trajectories. From a postmodern feminists’ viewpoint, new technologies such as genetic engineering, reproductive technology, and virtual reality are blurring the borders between the notions of human/machine, men/women, and sex/gender, and therefore have great potential to pave the way for a world without gender categories.\(^48\) Technological advances could liberate women from tasks and occupations that have been assigned to them due to prevailing gender role stereotypes, e.g., office assistants.\(^49\) Moreover, automating household work could relieve some women from the double burden of household work and labour market participation. In a related vein, some argue that there is no question that the FoW is feminist. By this they mean that the future of work will require a skill set traditionally gendered as feminine as its primary operating tool-kit. For the most part, this line of reasoning can be often found in academic scholarship on women leading or working for technology companies. In some ways, this represents a rather privileged perspective, which while certainly relevant to a class of women, particularly in the global south.

For this second group, the worry is more that new digital economy will exacerbate existing socio-economic inequities and contribute to the further degradation of women’s labour. For one, they point to the digital gender divide in South Asia, where low levels of education combined with prevailing socio-cultural norms restrict the capacity of women to access new opportunities. In India, for example, less than 30 per cent of women have access to the internet and only 14 per cent of women in rural India own a mobile phone.\(^48\) Further, they argue that the idea of the ‘gender digital divide’ needs to be understood in relation to the entirety of the access experience. ‘Empowerment can be said to have taken place only if the Internet enables an expansion of life choices for women.’\(^49\) Finally, even when the benefits of the digital economy do encompass women, they are likely to be concentrated for a small selection of educated and elite women.

The types of jobs women are engaged in are also particularly susceptible to automation. Women have traditionally occupied entry level, low-skill jobs in many industries, such as the IT and BPO sectors in India. Women have a very low share in the advanced technology jobs, (the non-routine, cognitive tasks) that are in demand in the digital economy, where employment expansion and real wage increase is much faster. Further, as certain tasks become automated or see a technology upgrade, they typically become the purview of male labour. This was observed in the agricultural sector in India with a switch to mechanization.\(^52\)

Digitalisation is also seen to disproportionately impact the informal sector that historically is highly feminised. As Pratap and Bose (2017) argue: “For every new job that digitalization has opened up, … (we) may not realize what job opportunities are being taken away, because in the first place, the majority are in the informal sector and may not be easily visible. A squeeze on the informal sector will not really take the form of outright ‘job’ losses; indeed, in most cases there are not ‘jobs’ as such, to be lost, but livelihoods. What would happen is a steady compression of incomes, making survival precarious.”\(^53\)

The growing platformisation of work also poses extra risks for women. It creates new forms of risk and vulnerability:

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50 Anri van der Spuy and Namita Aavriti, “Mapping Research in Gender and Digital Technology,” Ibid.
52 Anri van der Spuy and Namita Aavriti, “Mapping Research in Gender and Digital Technology,” Ibid.
from reinforcing cultural biases that relegate women to certain kinds of occupational categories to reproducing the gendered division of labour. Further, increasing paid employment does not mean an improvement in the conditions of women workers, as it could lead to a double burden on women, who still need to fulfill household obligations. Access to some form of social protection mechanisms - from sick-leave to medical insurance to child care - is particularly important for women. Work must be located within a broader social context as well - the gig economy will also transform social relations - from status within a community to decision-making power within a family unit. Leigh Star and Lucy Suchman decades ago instead turned feminist attention to the distribution of value and labour.44 Similarly, we need to turn our attention to how the categories “creativity” and “innovation”, categories Kavita Philip analyses as “the technological author”, smuggle in and valorise kinds of exploitation.55 Gina Neff’s work on Venture Labor (2012) and the individualization of social risks of innovation industries here, is also particularly relevant for a number of Southern economies, where state-provided welfare systems are weak or absent, creating unique risks for women.56

Another set of concerns is around the care economy, the majority of which is undertaken by mostly women and girls from socially disadvantaged groups.57 Within the ambit of care work, it is important to recognise how most care workers are frequently migrants and working in the informal economy under poor conditions and for low pay. Further, domestic workers also become an integral part of the care workforce as they provide both direct and indirect care in households. An ILO report on care work states that the care workforce as they provide both direct and indirect care in households will be able to access such care-technologies, if they are directed towards creating robotic assistants for hospitals and homes. In this scenario, many women are likely to be displaced from their existing paid-care jobs, and the new jobs that are created within a care economy are likely to be dominated by men, particularly if this change is technology-driven. Studies already show that gender biases restrict women’s entry into science and technology related industries, which tend to be associated with male capabilities.58 While women’s unpaid care responsibilities are likely to decrease, opportunities for decent work in other sectors will simultaneously be shrinking as well. Moreover, only middle-high income households will be able to access such care-technologies, and the burden of care work on women in poor households will remain as high as before.

Finally, scholarship on women in the digital economy draws attention to the reproduction of gender stereotypes in the digital economy - the disembodied personal assistant system bearing the female name Siri are one of the most prominent examples. This might reinforce existing gender roles for society as a whole and generations to come. A recent study by Carnegie Mellon University similarly revealed how 100 top employment pages operating through Google ads showed high-paying job ads 1,800 times to a male group and merely 300 times to a female group of users.59

already, much research and development (R&D) is being directed towards creating robotic assistants for hospitals and homes. In this scenario, many women are likely to be displaced from their existing paid-care jobs, and the new jobs that are created within a care economy are likely to be dominated by men, particularly if this change is technology-driven. Studies already show that gender biases restrict women’s entry into science and technology related industries, which tend to be associated with male capabilities. While women’s unpaid care responsibilities are likely to decrease, opportunities for decent work in other sectors will simultaneously be shrinking as well. Moreover, only middle-high income households will be able to access such care-technologies, and the burden of care work on women in poor households will remain as high as before.

Finally, scholarship on women in the digital economy draws attention to the reproduction of gender stereotypes in the digital economy - the disembodied personal assistant system bearing the female name Siri are one of the most prominent examples. This might reinforce existing gender roles for society as a whole and generations to come. A recent study by Carnegie Mellon University similarly revealed how 100 top employment pages operating through Google ads showed high-paying job ads 1,800 times to a male group and merely 300 times to a female group of users.59

58 Ibid.

## GLOSSARY TERMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>4IR</td>
<td>Bundesverband der deutschen Industrie (Federation of German Industries)</td>
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<td>4IR</td>
<td>Fourth Industrial Revolution</td>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>ASEAN 5</td>
<td>Association of Southeast Asian Nations (Indonesia, Malaysia, Philippines Singapore and Thailand)</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations (including Brunei, Burma, Cambodia, Laos and Vietnam)</td>
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<tr>
<td>BPO</td>
<td>Business Process Outsourcing</td>
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<tr>
<td>EPZ</td>
<td>Export Processing Zone</td>
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<td>FoW</td>
<td>Future of Work</td>
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<tr>
<td>ICT</td>
<td>Information and Communications Technology</td>
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<tr>
<td>ILO</td>
<td>International Labour Organization</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>MIC 2025</td>
<td>Made in China 2025</td>
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<tr>
<td>NSSO</td>
<td>National Sample Survey Office</td>
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<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
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<tr>
<td>SNA</td>
<td>System of National Accounts</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<td>WB</td>
<td>World Bank</td>
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<td>WEF</td>
<td>World Economic Forum</td>
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ABOUT THE AUTHOR

Urvashi Aneja is Founding Director of Tandem Research, an interdisciplinary research collective based in India, that generates policy insights at the interface of technology, society, and sustainability. Much of her current work explores the ways in which emerging digital technologies are recasting socio-economic and political relations in emerging economies, with a current focus on labor welfare and gender relations in India. She leads Tandem’s Future of Work & Learning and AI & Society initiatives. She is also Associate Fellow at the Asia Pacific program at Chatham House and a member of the T-20 Task Force for the Future of Work in G20 countries. Previously, she was Associate Professor of International Relations at the OP Jindal Global University and Research Fellow at the Observer Research Foundation. Urvashi has a DPhil and MPhil from the Department of Politics & International Relation at the University Oxford. Tandem Research seeks to build bridges between social science research, public policy, and public engagement; evidence-based policy, supported by broad-based public engagement, must steer technology and sustainability trajectories in India.

THE FUTURE IS FEMINIST

"The Future is Feminist" is a global project of the Friedrich-Ebert-Stiftung, working worldwide with feminists to develop positive visions for a better future that focus on economic policy issues and critical economic perspectives. The project in particular analyses the effects of digitalization and the future of work. It identifies common concerns of feminist and labour movements to create space for new powerful alliances aiming at social change. The project is a continuation of the work of feminist networks in the Asia and the Pacific, Latin America and the Caribbean, the Middle East and Northern Africa, and sub-Saharan Africa regions. It offers activists the opportunity to exchange ideas on burning issues, regional experiences and political strategies while serving as a space to experiment with new ideas.
The Future of Work discourse in Asia sees an optimistic narrative emphasizing a chance in the platform economy and digitalisation for women and a counter narrative foreseeing reproduction of obstacles for women by not distinguishing the different impact it will have for women and men.

A core concern is the link between economic globalization, trade liberalization and gender inequality - economic growth in labour intensive industrial sectors is driven by the exploitation of cheap female labour. Feminisation of labour is mainly driven by an attempt to provide the cheapest possible production for international suppliers, often leaving women at the lowest levels of the global value chain.

Postmodern feminists see great potential for the new digital economy potential to pave the way for a world without gender categories by liberating women from tasks and occupations assigned to them due to prevailing gender stereotypes. Others fear that the new digital economy will exacerbate existing inequalities and contribute to the further degradation of women’s labour. If the benefits of digital economy encompass women, it is likely only a small selection of educated and elite women who will profit.

For further information on this topic: www.fes.de/themenportal-gender-jugend-senioren/gender-matters/the-future-is-feminist