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SDGs in Labor Markets



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Chi-Wei Li

About the CTPECC

CTPECC is a full member of Pacific Economic Cooperation Committee (PECC), which is an international organization for economic cooperation in the Asia-Pacific region and plays a key role in consultation and advice on APEC's major initiatives and plans. The participation of CTPECC is to assist the government in researching and analyzing economic cooperation plans, and to strive for greater opportunities to participate in cooperation mechanisms and dialogues.

An Understatement of the Force that Drives Women Out of Labor Markets and Men Out of Their Families

Renee Yeh

Managing Director,
Girls in Tech Taiwan



Introduction

The labor market in Asia has undergone significant transformations in recent years, with more women entering the workforce and contributing to economic growth. However, despite this progress, women continue to face several challenges that hinder their full participation and career advancement in the labor market. This report delves into the key issues faced by women in Asia, with a focus on unreasonably long working hours, high real-estate prices, the motherhood penalty, and underrepresentation in management and boardrooms. To shed light on these challenges, the report presents statistical data and case studies from various Asian countries, providing insights into the gender dynamics in the labor market. Additionally, the report explores potential solutions and opportunities to address these disparities and foster a more inclusive and supportive environment for women in the workforce.

Unreasonably Long Working Hours: A Barrier to Women's Labor Force Participation

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Singapore	2,402	2,402	2,402	2,392	2,371	2,366	2,345	2,330	2,324	2,288	2,298
Mexico	2,121	2,120	2,136	2,134	2,140	2,146	2,149	2,149	2,139	2,124	2,128
Costa Rica	2,285	2,233	2,141	2,122	2,148	2,205	2,179	2,121	2,060	1,913	2,073
Taiwan	2,144	2,141	2,125	2,135	2,104	2,035	2,035	2,033	2,027	2,021	2,000
Columbia	-	-	-	-	2,325	2,315	2,284	2,283	2,272	1,964	...
Chile	2,050	2,027	2,021	1,994	1,994	1,978	1,963	1,956	1,930	1,825	1,916
South Korea	2,136	2,119	2,106	2,076	2,083	2,068	2,018	1,993	1,967	1,908	1,915
Greece	1,950	1,990	1,997	1,949	1,935	1,943	1,947	1,961	1,917	1,731	1,872
Poland	1,824	1,820	1,816	1,822	1,829	1,831	1,812	1,787	1,783	1,769	1,830
The U.S	1,778	1,782	1,780	1,782	1,783	1,778	1,778	1,782	1,777	1,767	1,791
Ireland	1,737	1,738	1,743	1,757	1,771	1,763	1,775	1,782	1,771	1,746	1,775
Estonia	1,827	1,796	1,777	1,771	1,763	1,767	1,768	1,707	1,694	1,637	1,767
Israel	1,947	1,919	1,908	1,895	1,895	1,922	1,918	1,910	1,898	1,783	1,753
Czech	1,805	1,776	1,764	1,774	1,751	1,774	1,776	1,785	1,786	1,704	1,753
New Zealand	1,746	1,734	1,756	1,758	1,753	1,754	1,756	1,759	1,783	1,739	1,730
Hungary	1,754	1,738	1,734	1,749	1,746	1,760	1,747	1,730	1,722	1,657	1,697
Australia	1,774	1,771	1,766	1,755	1,751	1,739	1,738	1,733	1,722	1,683	1,694
Canada	1,713	1,722	1,716	1,710	1,712	1,706	1,695	1,708	1,690	1,644	1,685
Italy	1,773	1,734	1,719	1,716	1,718	1,722	1,719	1,719	1,710	1,554	1,669

Source: Ministry of Labors, Taiwan

Across several Asian countries, long working hours have become deeply ingrained in work culture. This can be particularly challenging for women, as they often bear a disproportionate burden of domestic responsibilities and caregiving duties. As a result, women may struggle to dedicate excessive hours to their jobs, leading to potential

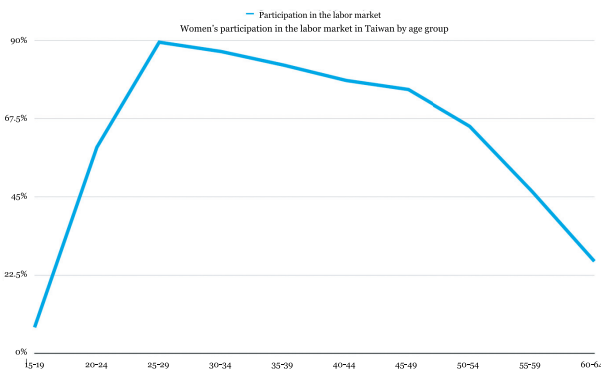
career stagnation and, in some cases, exit from the labor market altogether.

Taiwan's Ministry of Labors published data showing average working hours in some various countries in 2021:

1. In Singapore, laborers spent an average of 2,298 hours at work in 2021.
2. In Taiwan, the average working hours were 2,000 hours in the same year.
3. South Korea, known for its intense work culture, saw an average of 1,915 hours spent at work by laborers in 2021.

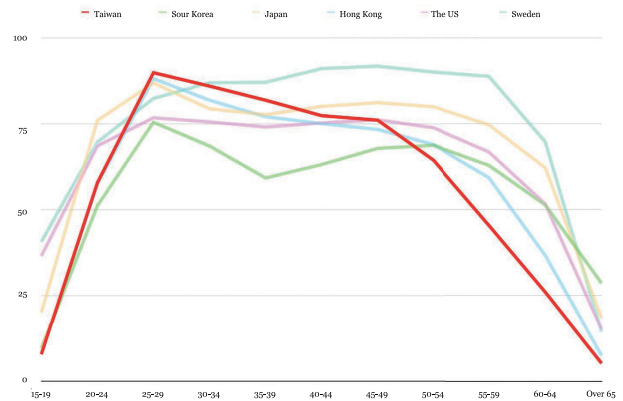
These statistics indicate that long working hours can be a significant deterrent for women seeking to establish a balance between their professional and personal lives.

Women's Labor Force Participation in Taiwan



Source: National Statistics, Taiwan

In Taiwan, women's labor force participation is commendably high at 91.2% when they are between 25 and 29 years old. However, this rate significantly drops as they age. This trend can be partially attributed to the challenges posed by unreasonably long working hours, which may become increasingly difficult for women to manage as they take on additional familial responsibilities or seek work-life balance.

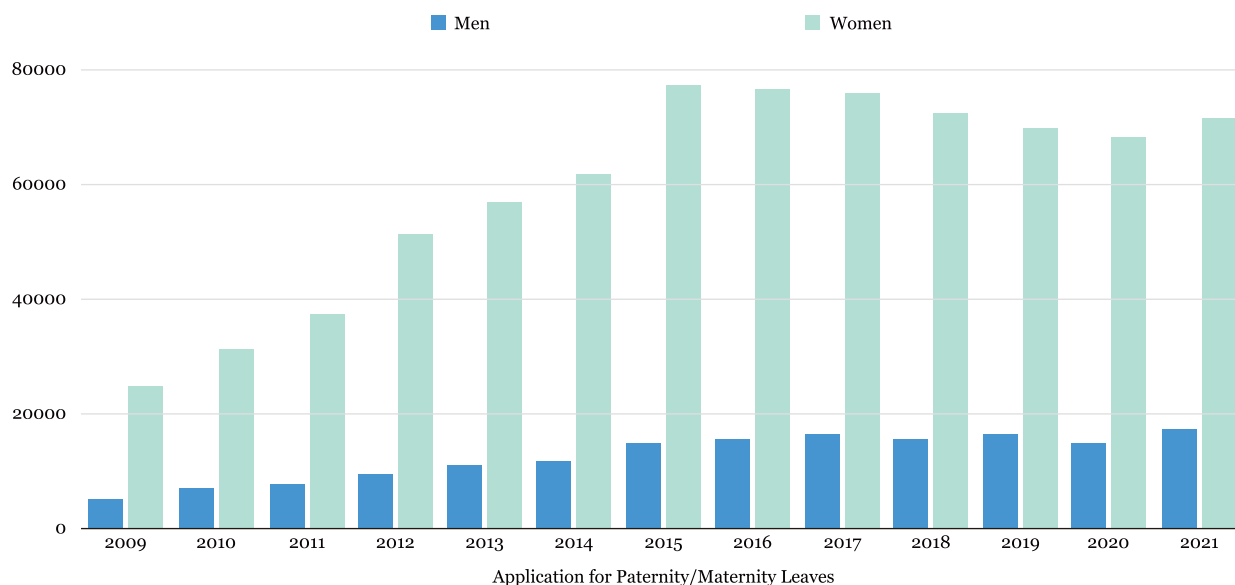


Source: National Statistics, Taiwan

In Taiwan, many young women actively enter the labor market after completing their education and establishing independent incomes. However, approximately 15% of these women choose to leave their careers once they start their families. Unlike women in some other countries who may decide to return to the labor market once their children are older, women in Taiwan often do not come back to the workforce. Instead, after taking care of their young children, these women assume the responsibility of caring for their elders or in-laws.

Paternity and Maternity Leaves: A Gender Disparity Indicator

The gender disparity in labor market challenges is evident in the comparison of paternity and maternity leaves. In 2021, 17,503 men applied for paternity leaves, while 71,335 women applied for maternity leaves. This stark difference reflects the traditional roles and expectations placed on men and women, with women taking on a more significant burden of caregiving responsibilities. The lack of equitable family leave policies can contribute to women's reluctance to remain in the labor market, further exacerbating gender disparities.



Source: National Statistics, Taiwan and Ministry of Labors, Taiwan

The Motherhood Penalty: Impact on Women's Career Advancement

The motherhood penalty refers to the negative impact that becoming a mother can have on a woman's career and earnings. It is a phenomenon observed in many societies, where women face disadvantages in the workplace due to their roles as mothers, while men often do not experience similar setbacks as fathers.

The motherhood penalty manifests in various ways, such as reduced opportunities for promotions and career advancement, lower salary offers, and increased likelihood of facing discriminatory treatment. When women take time off work to care for their children or opt for flexible work arrangements, they may experience decreased earnings and career prospects compared to their male counterparts who do not face similar penalties for being fathers.

This penalty can be attributed to several factors, including societal expectations and gender norms, unconscious bias, and assumptions about women's commitment to their careers after becoming mothers. Employers may hold biased views that women will be less dedicated to their jobs or that motherhood might interfere with their work performance. As a result, women may be overlooked for career advancements or given fewer opportunities, perpetuating the gender wage gap and limiting their professional growth.

The motherhood penalty not only affects individual women but also has broader implications for gender equality in the workforce. It can contribute to the underrepresentation of women in leadership



Infographic Source: UN Women

and management positions and hinder progress towards achieving gender parity in various industries and sectors.

Societal expectations and traditional gender norms play a crucial role in perpetuating the motherhood penalty and its impact on fatherhood. In many cultures, there is a prevailing expectation that women should assume the primary responsibility for caregiving and raising children. Conversely, men are often expected to be the primary breadwinners and prioritize their careers.

As a result, when women become mothers, they may face pressure to reduce their working hours or temporarily leave the labor market to care for their children. Simultaneously, men may experience pressure to work longer hours or prioritize their careers to compensate for the potential loss of income or career opportunities faced by their female partners due to the motherhood penalty.

In response to the motherhood penalty and the need to support their families financially, some men may feel compelled to spend more time at work, often at the expense of their own work-life balance and fatherhood. Long working hours can create a conflict between work responsibilities and family commitments, making it challenging for fathers to be actively involved in their children's lives.

The pressure to conform to societal expectations of being a provider can lead to fathers sacrificing time they could otherwise spend with their children. This imbalance in work-life responsibilities can result in fathers feeling disconnected from their families and missing out on valuable moments in their children's upbringing.

The lack of supportive work-life balance policies for both men and women can exacerbate the challenges faced by fathers in managing their career and family responsibilities. In many workplaces, there may be limited availability of paternity leave

or flexible work arrangements that allow fathers to actively participate in caregiving duties.

The absence of such policies can create a dilemma for fathers, as they may feel torn between their desire to be present for their families and the pressure to maintain their commitment to their careers. Consequently, many fathers may end up prioritizing work over family, perpetuating the notion that caregiving is primarily the mother's responsibility and reinforcing traditional gender roles.

The motherhood penalty and the resulting pressure on fathers to spend more time at work can have adverse effects on father-child relationships. Children benefit greatly from having active and engaged fathers in their lives, and research has shown that positive father-child relationships contribute to children's emotional and cognitive development.

However, when fathers are limited in their involvement due to work demands or societal expectations, it can lead to strained relationships and missed opportunities for bonding and nurturing. This can have long-term consequences on children's well-being and the overall family dynamic.

High Real-Estate Prices: Impact on Remote Working

High real-estate prices in Asia have resulted in many families living in smaller apartments or shared living spaces, where having a dedicated home office is a luxury. This creates challenges for women, particularly working mothers, who may struggle to find suitable remote workspaces. As a consequence, remote working becomes less viable for women, especially during periods when schools are closed due to weather or epidemics. The lack of adequate remote workspaces and flexible work arrangements can add further stress and strain to women attempting to balance work and family responsibilities.

High real-estate prices often force families to live in smaller apartments or shared living spaces. With limited square footage, it becomes challenging to dedicate a specific area as a home office. Working mothers may find it difficult to establish a quiet and functional workspace within their homes, which is essential for maintaining productivity during remote work.

Without a designated home office, women may struggle to create a work-conducive environment, leading to distractions and disruptions that can negatively impact their professional performance. Additionally, the lack of privacy may hinder their ability to engage in virtual meetings or handle sensitive work-related matters.

For working mothers, the challenge of managing work responsibilities alongside family and caregiving duties is already demanding. The absence of a dedicated home office space exacerbates this challenge, making it harder for women to compartmentalize work and family life.

The blurred boundaries between work and personal life can lead to increased stress and reduced productivity. Additionally, women may feel pressured to multitask constantly, attending to work-related tasks while also fulfilling caregiving responsibilities, without adequate separation of space for these distinct roles.

In Asia, weather conditions like typhoons or floods can result in school closures and disruptions to daily routines. During such instances, working from home becomes even more critical for parents, especially for mothers who may need to be available for their children throughout the day.

However, the lack of a dedicated home office can make remote work challenging during these periods. With limited space, it may be difficult for women to find a quiet and uninterrupted area to focus on work while ensuring their children's well-being and safety.

The concept of work-life integration emphasizes the fluidity between work and personal life, allowing individuals to strike a balance that suits their unique needs. However, high housing prices and small living spaces can hinder working mothers' ability to achieve this integration effectively.

In an ideal scenario, remote work should offer flexibility for working mothers to adapt their schedules to accommodate both work and family commitments seamlessly. Unfortunately, the lack of a proper home office space may result in a constant struggle to find a balance, leading to added stress and feelings of inadequacy.

Underrepresentation of Women in Management and Boardrooms

Despite the increasing number of women in the workforce, they continue to be underrepresented in management and boardrooms across various industries in Asia. The combination of long working hours, gender biases, and limited opportunities for career advancement can hinder women's progress and limit their influence in shaping organizational strategies and policies.

Gender bias in leadership selection and promotion remains a significant obstacle to achieving gender parity in management and boardrooms. Studies have shown that unconscious biases often influence decision-makers when evaluating candidates for leadership positions, leading to the preference for male candidates over equally qualified female candidates. These biases can result in women being overlooked for promotions or being assigned to less critical roles within an organization.

Furthermore, the lack of diversity in the decision-making process itself can perpetuate gender bias. When male-dominated selection committees and boards make leadership decisions, the perspectives and experiences of women may not

be adequately considered, leading to a perpetuation of the status quo and a continued underrepresentation of women in top leadership roles.

Mentoring and sponsorship programs play a vital role in nurturing talent and promoting career advancement. However, women may face challenges in accessing such opportunities, particularly when they are underrepresented in leadership roles. Male-dominated networks may lead to fewer mentorship and sponsorship opportunities for women, limiting their access to guidance, professional development, and advocacy.

Creating diverse and inclusive mentoring and sponsorship programs that actively support the advancement of women in leadership positions can be instrumental in breaking down barriers and promoting gender diversity in management and boardrooms.

The underrepresentation of women in management and boardrooms is not only an issue of fairness and equity but also has practical implications for organizations and economies. Research has consistently shown that gender-diverse leadership teams can enhance decision-making processes, foster creativity, and improve overall business performance.

Diverse leadership teams bring a broader range of perspectives, experiences, and insights to the table, enabling organizations to adapt more effectively to

a rapidly changing business landscape. Moreover, companies with gender-diverse leadership have been found to outperform their less diverse counterparts, suggesting that promoting gender equality at the top levels of organizations can be a strategic advantage.

Conclusion

Women's engagement in the labor market in Asia is on an upward trajectory, yet several challenges persist, impeding the realization of gender equality. Unreasonably long working hours, high real-estate prices, the motherhood penalty, and underrepresentation in management and boardrooms continue to hinder women's full participation and career advancement. Addressing these challenges requires concerted efforts from governments, employers, and society as a whole. Initiatives promoting work-life balance, equitable family leave policies, and flexible work arrangements can create a more inclusive and supportive labor market for women. Empowering women in the workforce is not only crucial for fostering economic growth but also for promoting social progress and gender equality in the broader Asian society. By prioritizing women's representation and advancement, Asia can unleash the full potential of its workforce, driving sustainable economic development and prosperity for all.

The Gender Pay Gap, its Structural Challenges, and Some Related Thoughts

Mei-Chun Liu,

Professor and Chair of Graduate Institute of Labor Research,
National Chengchi University



Gender Pay Gap, the Core of the Gender Equality Movement

Taiwan's Equal Pay Day regressed last year after steadily narrowing the gap over the decades. Women have to work 58 more days than men to earn the same income as men in 2022. Equal Pay Day vividly captures gender pay inequality in a very concrete way with women paid less for lack of reasonable cause. This pay gap has a profound impact on women's economic independence, self-esteem, and chances to be trapped in poverty. Therefore, the pay gap between the sexes has always been the focus of the international women's rights movement.

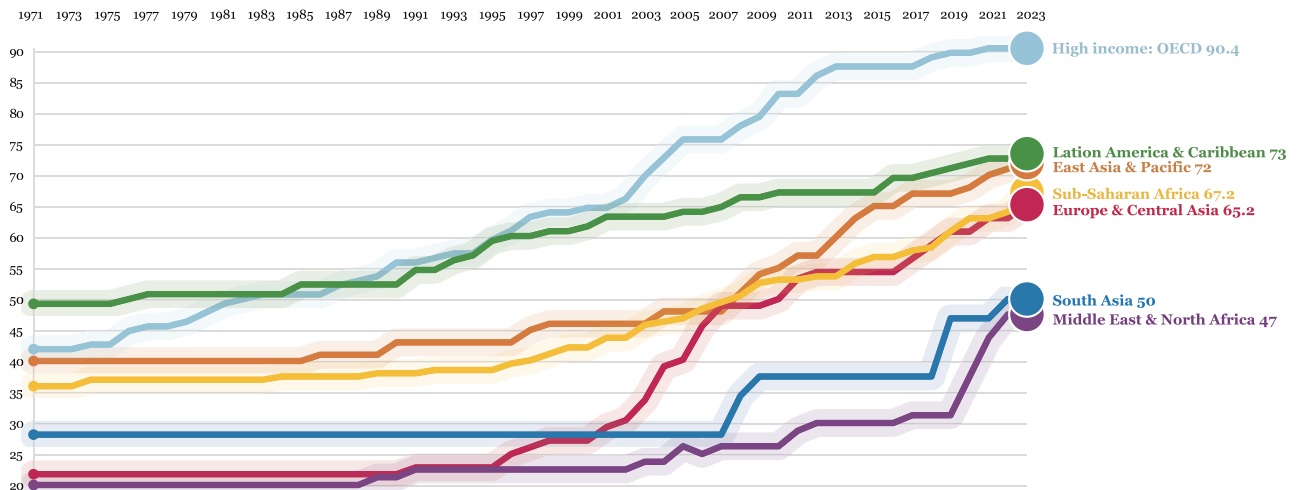
As a result, international organizations over the decades have put forward conventions, recommendations, guidelines, programs, etc. to address this issue. In recent years, the European Union and other advanced economies have even stepped up policy efforts to achieve greater results. This issue has also attracted the attention of academic researchers for many years, trying to explain this phenomenon. Various studies highlight different

factors that altogether contribute to this phenomenon. It is undeniable that government policies, employers' practices, trade unions' actions, laborers' self-expectation, and social norms all have certain effects on the gender pay gap.

This short article is divided into three parts. First, it briefly introduces the current situation of the gender pay gap worldwide and the complex and diverse causes behind it. Second, it introduces the specific actions of European unions and other advanced economies in the past ten years. Finally, it proposes the direction in which we can work hard in the future.

Taiwan's Gender Pay Gap is Modest Comparatively Speaking

First of all, World Bank has a nicely drafted interactive graph as presented below which clearly shows that the gender pay gap is the smallest in OECD high-income countries, with a gender gap of about 10%, followed by countries in Latin America/the Caribbean, and East Asia/the Pacific respectively. Middle East, North



Source: World Bank. https://wbi.worldbank.org/en/data/exploretopics/wbi_gpd

Africa, and South Asia have the largest gap, with women only 50% of men.

What about Taiwan? The gender pay gap in Taiwan has incrementally narrowed to less than 15% over the years, far below the average of the East Asia and Pacific regions to which Taiwan belongs. However, the pandemic of the century from 2021 slightly widen the gap to 15.8% in 2022, indicating that the epidemic adversely affects women more than men. Chang Chin-Fen's (2017) research confirmed that women's income is more susceptible to the impact of the environment than men, such as the global financial crisis in 2008, which worsened the gender gap.

Pay Transparency Actions in International Communities

How to narrow the gap? The European Union, Canada, the United States, and the United Kingdom have promoted pay transparency policies in the past decade. For example, Ontario, Canada, formulated a salary transparency law in 2018. Alberta, Quebec, and British Columbia followed suit in 2020 and 2023. New York City in the United States also enacted a salary transparency law in 2022. California catches

up and implements the salary transparency law in January 2023. The European Union also passed the Pay Transparency Directive in April 2023. The United Kingdom is currently adopting a pay transparency pilot scheme, a voluntary experimental program. Even though it is a pilot scheme, the UK has already put forward in April 2017 the Gender Pay Gap Information Regulations (as a part of the Equality Act 2010), and commentators believe that the future of the UK is going in the direction of legalization. The above-mentioned legalization efforts vary in intensity. Some obligate enterprises to comply, some only apply to the public sector, some stipulate that employers are required of this legal obligation only when the number of employees reaches a certain scale, and others require disclosure of salary levels when recruiting. In short, although different countries have their own way of pursuing implementation strategies, they all show their determination to try to narrow the gender pay gap.

Causes Behind the Pay Gap

The international research community has long concerned with the gender pay gap for many years and has been trying to find out the factors that cause

the gap. Literature often cited in the area includes Petersen & Morgan (1995), England & Folbre (1999), and Blau & Kahn (2016) whose studies suggest as main factors unequal pay for equal work, occupational segregation (job allocation), and unequal pay for equal value, among which the impact of occupational segregation persists or even worsens. Local researchers (such as Chang & Du, 2012; Chang, 2017; Hsu, et al., 2006; Chen & Kuan, 2006) have similar point of view by indicating that structural factors such as occupation, industry, and job characteristics can better explain the gender pay gap.

However, the structural factors referred to in the above analysis are limited to the workplace, but the choice of occupation, types of employment or even career aspiration are to a considerable extent constrained by factors outside the workplace, such as traditional gender norms, sexual division of housework and other cultural as well as gender intertwined influences. Therefore, in order to reduce the gender wage gap, other than pushing for the above-mentioned salary transparency, we must also pay attention to the main causes behind the gender wage gap. For instance, occupational segregation, and various manifestations of occupational segregation, such as horizontal segregation, glass ceiling effect, glass wall, and maternal wall, are often caused by traditional gender norms imposed on women.

Due to limited space, we will not elaborate on the impact of occupational segregation on the micro and macro levels. The issue that needs to be examined here is the profound influence of traditional gender norms. Even though women's educational level has been greatly improved due to the expansion of higher education in the past three decades, once they enter the stage of marriage and childbearing, the impact of marriage and childbirth on labor force participation and career development is significant. And the impact of career development seems to

manifest negatively on women only, resulting in the so-called maternal penalty. In contrast, getting married and having children does not affect fathers' labor force participation rate, career progression, and most importantly of all, the wage. The hard truth is fathers do not suffer wage loss but enjoy the so-called paternal premier. The maternal penalty here refers not only to the reduction of salary income, but also intermittent employment, the interruption of career progression, and the giving up of promotion opportunities in order to meet family needs. Therefore, the biggest challenge for future action lies with traditional gender norms and stereotypes.

Literature shows having higher education helps women join the labor market due to better human capital and enhanced aspiration for a better life. Rising living expense dictates dual wage earners a must, a condition that prompts female labor force participation rate. However, higher education does not prevent women from acting as major caretakers, leading to greater work-family conflicts, compared to men. Statistics suggest women take parental leave at a much higher percentage than men, a piece of evidence indicating that social norm thinks women are better fit for child care.

Wisdom from Nordic Countries

When it comes to this issue, we must mention the Nordic countries, because they are the places with the smallest gender gap in the world in almost every aspect of gender equality, let alone labor force participation rate and wage level. The most often mentioned reasons behind the achievement of gender equality are publicized care services and the encouragement of men and women to engage in enumerative employment and take up caretaker's role at the same time. Division of labor at the household level facilitates women to pursue careers. When care

for the children and the elderly is regarded not as private duty but societal responsibility, women will not necessarily be subject to care responsibilities and forced to leave the workplace. Both men and women can enjoy the care services provided by the state without sacrificing women's careers. Sweden and Norway support the enviable dual role of worker and caregiver with national welfare policies, making women in the two countries not only have the highest labor force participation rates but also above-average fertility rates among advanced economies, not to mention it's being one of the lowest gender pay gaps in the world.

The challenges of Taiwan's declining birth rate and aging population are severe. If increasing the female labor force participation rate and the fertility rate is the top priority of national policy, the experience of Nordic countries supporting family care responsibilities deserves sincere consideration. The social investment perspective promoted in major welfare states made it clear that social expenditure, far from being purely a cost that hampers economic competitiveness, can instead enhance economic efficiency and social equality as well. Social investment in supporting family policy can not only emancipate women's labor force so that labor shortage due to persistent record-low fertility rates could be ameliorated but obstacles that prevented women from engaging in productive employment could be addressed. As a result, we are looking forward to a more progressive social policy that supports every man and woman to pursue a balanced work-family life and enjoy workplace equality.

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The Advancement of Green Jobs in the Net-Zero Economy

Dr. Chen-Sheng Ho

Research Fellow,
Department of International Affairs
Taiwan Institute of Economic Research



The realization of the net-zero economy has been gathering momentum in recent years and the potential for increasing the number of green jobs has also been enhanced. In order to enrich our knowledge of the important role that green jobs will play in the future, it will be useful to have a basic understanding of the meaning of green jobs. The International Labor Organization (ILO) has defined green jobs to be decent jobs that promote the preservation or restoration to the environment. The jobs can be in traditional sectors, such as manufacturing and construction. They can also be in emerging green sectors, such as renewable energy and energy efficiency. Specifically, green jobs are able to: 1) Enhance energy and raw materials efficiency; 2) Restrain greenhouse gas emissions; 3) Reduce waste and pollution; 4) Safeguard and restore ecosystems; and 5) Strengthen adaptation to the climate change effects (ILO, 2016).

Views from International Organizations

Furthermore, the Organization for Economic Cooperation and Development (OECD) has also discussed the green transition that is taking place. There is a lack of workers with pertinent skills, so that

the green transition could be hampered. It can be said that the green transition will be combined with megatrends, such as digitalization and demographic change, so that the geography of jobs and the world of work will be reshaped (OECD, 2023).

The World Bank has stated that global net zero will be realized when human-caused greenhouse gas (GHG) emissions have been lowered to the minimum levels. Particularly, anthropogenic removals mean the withdrawal of GHGs from the atmosphere because of human activities, such as the utilization of technological solutions through direct air capture and storage. Most importantly, revenues that are generated from carbon pricing through the international carbon markets can be invested in communities as well as promote socioeconomic development and a just transition (World Bank, 2022).

Green Jobs in the Net-Zero Economy

Green jobs can be found in various sectors of the economy. An important sector is renewable energy. The jobs relating to renewable energy consist of technicians, construction workers and engineers. They will install and maintain solar panels and

wind turbines. Workers will be needed to support renewable energy infrastructure and grids. In addition, financial services jobs will also be available. The most well-liked finance professions will be those that assist with net-zero transitions. In addition, emissions and environmental auditing is a growing field that will offer high-paying and ecologically sustainable careers (Earth.Org., 2021).

Another example is the transition to net-zero jobs. It is envisioned that there will be an increase in jobs that focus on removing industrial and hazardous pollutant waste. Moreover, jobs related to production of electric vehicles (EVs) will become more numerous. There will be a rise in the demand for engineers, factory workers and designers in the EV sector. Moreover, carbon pricing related jobs will become more popular in the future (Earth.Org., 2021).

APEC's Views

The APEC Economic Leaders had developed the “APEC Putrajaya Vision 2040” in 2020 to guide the work of APEC in the years to come. Leaders have emphasized the importance of intensifying inclusive human resource development. In addition, Leaders have called for promoting economic and technical cooperation to ensure people have the skills and knowledge for the future. Furthermore, Leaders have called for addressing environmental challenges, such as climate change, extreme weather and natural disasters (APEC, 2020).

An implementation plan was developed in 2021 and called the “Aotearoa Plan of Action” (APA). The APA calls for APEC member economies to innovate and exchange expertise on skills and human resource development. APEC will generate cost effective low and zero emissions technologies, sustainable finance and carbon pricing mechanisms (APEC, 2021). It can be said that these actions for mitigating environmental challenges will lead to the creation of green jobs.

The APEC Business Advisory Council (ABAC) is also emphasizing the importance of implementing an

ambitious response to climate change. In the “2023 ABAC Report to Leaders,” ABAC has stated that the substantial reductions of greenhouse gas emissions will be required to avoid irreversible catastrophic impacts. Therefore, it will be necessary to reduce the use of fossil fuel as well as to strengthen carbon capture and storage in the fossil fuel infrastructure (ABAC, 2023).

In addition, ABAC has called for promoting a just, realistic, ambitious and sustainable energy transition. A recommendation is that APEC should adjust energy, assets, systems, and production practices to a green and low-carbon economy, including by using trade and digital technologies. Another recommendation is that APEC should follow a diverse range of transition pathways, such as renewable energy, hydrogen/ammonia, energy-saving technologies, biomass, carbon recycling and natural gas (ABAC, 2023).

Taiwan and Net-Zero Emissions

An important milestone was reached in March 2022 when Taiwan published the “Taiwan’s Pathway to Net-Zero Emissions in 2050.” The major objectives are to advance technology R&D and innovation, direct the green transition of industry, and push for a new era of economic growth. In addition, Taiwan seeks to support green financing, increase investment and achieve a smooth transition period (NDC, 2023).

The pathway is centered on the four important transition strategies of “Energy Transition”, “Industrial Transition”, “Lifestyle Transition”, and “Social Transition.” Additionally, there are two central governance foundations of “Technology R&D” (net-zero technology; negative-emission technology) and “Climate Legislation” (regulation and policy; carbon pricing and green finance). Moreover, the attainment of net-zero emissions is supported by “12 key strategies” consisting of: 1) Wind/Solar PV; 2) Hydrogen; 3) Innovative Energy; 4) Power Systems and Energy Storage; 5) Energy Saving and Efficiency; 6) Carbon Capture, Utilization & Storage (CCUS);

7) Carbon-free & Electric Vehicles; 8) Resource Recycling & Zero Waste; 9) Carbon Sinks; 10) Green Lifestyle; 11) Green Finance; and 12) Just Transition (NDC, 2023).

Conclusion

It can be inferred that the realization of the net-zero economy will require concerted efforts among countries, such as through the cooperation of APEC member economies with each other. Moreover, public-private partnerships will be necessary to strengthen the implementation of actions for achieving the net-zero economy. In doing so, the enactment of effective governmental policies can positively lead to the increase of green jobs that the private sector will play a major role in creating.

The ILO has called for ensuring a fair and socially acceptable transition in which the guiding principles of inclusiveness and solidarity are being adhered. The notion of just transition is about making sure that the economic, environmental and social consequences are maximizing opportunities of decent work for all, reducing inequalities, supporting social justice, and assisting industries, workers and communities that are being affected negatively (ILO, 2019).

Specifically, the ILO has derived the following recommendations (ILO, 2019) that deserve our utmost attention:

1. Create mechanisms of inclusive social dialogue to build solid social consensus to achieve transformation without significant social and economic disruption.
2. Examine employment, social and economic effects of transition and potential of green jobs.
3. Implement skills development and enhance measures to allow transitions in labor markets
4. Develop innovative social protection policies to ensure the protection of workers and vulnerable groups in light of largescale climate adaptation and mitigation strategies.
5. Strengthen the transfer of technology and knowledge to developing countries.

6. Enhance innovation and investment by the public and private sectors, so as to advance economic transformation, sustainable and inclusive growth, and the creation of green jobs.

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5th Floor, Number 16-8, Dehuei Street,
Zhongshan District, Taipei City 10461,
Taiwan (Republic of China)



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For more information,
please visit CTPECC website or email the editor: Mr. Chi-Wei Li d34694@tier.org.tw

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