

Doctoral Dissertation, 2023

Factors Restricting Occupational Expectations
of Japanese Females
– Results from International Comparisons –

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March 2024

日本女子の職業アスピレーションを下げる要因：国際比較による分析

(要約)

近年、日本では、少子化に起因する労働力減少によって、女性の労働参加の重要性が高まっている。この課題に対処するため、政府は「女性が輝く社会」を実現し、ワークライフバランスを支援するための政策を導入してきた。しかし、労働市場では、男女賃金格差や女性のキャリア発展の不平等が依然として存在している。この問題を鑑み、本論文は、日本女子の職業アスピレーションに焦点を当てる。特に、日本の女性は、OECD の PISA や PIAAC で高得点を取るにも関わらず、男子や他国の女子より職業アスピレーションが著しく低いため、その要因を追究する。このテーマに着目するのは、高校時点で女子の職業アスピレーションが低ければ、大学進学への意欲も下がり、その後の就職やキャリア展開も難しくなるからである。従って、日本女性の人的資本を最大限に利用するには、女性の管理職割合を増加させたり、出産後の職場復帰を奨励するだけでは不十分で、女子学生が就業する以前に、将来の職業に対する志を高める必要がある。

本研究は、OECD の PISA 2018 データを分析した国際比較の量的調査と、日英の女子大学生をインタビューした質的調査を組み合わせたものである。PISA 調査には、「30 歳になった時にどのような職業に就いていると考えられるか」という質問が含まれており、15 歳の高校生の回答に、社会経済的指標が適用されている。それを利用して、男女別に平均値を比較すると、女子の方が男子より社会経済的地位の低い職業を選択しているのは、先進 36 か国の中で、日本が唯一の国だという事が明らかになる。量的調査では、この結果を基に、2 つの分析を行った。

第 1 に、大学進学希望、数学と国語の点数、親の学歴と職業等、Bronfenbrenner の生態学的システム理論によるミクロ・メゾ要因との関係を分析した。その結果、日本では、平均的に女子の職業アスピレーションが男子よりも低いのは、4 年制大学への進学希望割合と数学の点数の低さが関連しており、他国では、女子の職業アスピレーションが男子に対して高いのは、大学進学希望割合と国語の点数の高さが関連している事が示された。第 2 に、女性労働に関連するエックソ・マクロ要因について分析した。その結果、職業アスピレーションの男女差と、各国の男女平等状況が関連している事が判明した。つまり、日本は男女賃金格差が大きく、女性の管理職割合が低く、男性の家事労働時間が短く、主婦に対する見方が肯定的であるため、女子の職業アスピレーションが男子よりも著しく低い事が示唆される。

質的調査は、日本と英国で学ぶ女子大学生 48 人をインタビューしたものである。その結果、日本の学生は、英国の学生よりも、将来期待する職業の社会経済的地位が低い事が確認された。その背後には、日本の学生は総じて、親から威信の高い職業を奨励されず、ワークライフバランスに対する懸念が強い事が挙げられる。これらの洞察を踏まえ、女性が仕事と育児を両立させるためのワークライフバランス政策、特にフレックスタイム制度とその利用について、政府統計分析と文献調査を通じて、日英で比較した。その結果、政策面では、日本も英国も、全労働者が柔軟な働き方を実現できる制度を整備しているものの、その利用に大きな違いがあることが明らかになった。

本研究の結果から、日本の女子が、男子や他の先進国の女子に比べて、職業アスピレーションが低い理由は、根強い男女役割分担規範と厳しい労働環境の影響があると推察される。量的分析によって示唆された、大学進学希望と数学点の男女差も、ジェンダーバイアスやステレオタイプに起因する可能性がある。これらを変えるには、より柔軟な働き方の普及や、男女共働き共子育てモデルを基にした社会保障と所得税制度へ移行する改革が不可欠である。

さらに、学校教育やメディアにおいて、性別に基づく偏見を排除し、女性が経済的に独立するための人生設計及びファイナンシャル計画教育も強化する必要がある。これらの対策を通じて、日本女子の職業アスピレーションを高め、そのスキルを最大限に活用すれば、国の生産性は向上し、持続可能な経済に繋がると考えられる。

この研究の制約は以下の通りである。まず、日本の労働市場は、メンバーシップ型であるため、他の先進国のジョブ型とは異なり、職業に対する認識が希薄である事が挙げられる。次に、男女平等指標が揃った国のサンプルサイズが、32 から 36 か国に限定されているため、職業アスピレーションの男女差との関係を一般化するのに慎重さが求められる。さらに、インタビュー対象は、キャリア志向の高い女子大学生が主に参加していた可能性があり、特に英国の場合、国籍、人種、育った国などが多様なため、文化的影響の解釈が複雑である。今後の研究として、15 歳の学生が期待する職業と、30 歳で実際に従事した職業を追跡する縦断的調査を行う事が重要である。特にその結果に基づき、女子が期待した職業において、促進または妨げとなった要因を詳細に検討することが不可欠である。

Factors Restricting Occupational Expectations of Japanese Females
- Results from International Comparisons -
(Abstract)

In recent years, the importance of women's participation in the workforce has increased due to a diminishing labour force, resulting from declining birth rates. To address this issue, the government has introduced policies to realise a "society where women shine" and promote a better work-life balance. However, despite efforts, gender inequalities in wages and career advancement persist in the labour market. Considering these challenges, this thesis focuses on the occupational expectations of Japanese females. The main reason is because Japanese females have significantly lower occupational expectations than those of males in Japan and females of other countries, despite scoring very high in OECD's PISA and PIAAC assessments.

Thus, this research explores factors contributing to this situation, as female students with low occupational expectations during high school may lack motivation to pursue university education, which in turn could pose difficulties in their subsequent job search and career advancement. Therefore, maximising the human capital of Japanese females requires more than just increasing the representation of women in managerial positions or encouraging their return to work after childbirth. It is essential to enhance female students' aspiration towards future occupations before they enter the workforce.

This study combines quantitative studies using the OECD's PISA 2018 data for international comparisons and a qualitative investigation involving interviews with female university students in Japan and the UK. The PISA survey includes a question asking 15-year-old high school students the kind of jobs they expect to have when they are 30, with socioeconomic indicators applied to their responses. Utilising these data and comparing averages by gender, the study reveals that, among the 36 developed countries, Japan is the only one where females on average choose occupations with significantly lower socioeconomic status compared to males.

Based on this finding, a quantitative analysis was carried out in two parts. Firstly, based on Bronfenbrenner's ecological systems theory, individual characteristics and the micro/meso factors were examined, such as the aspiration to go to university, scores in maths and reading, and parents' educational background and occupation. As a result, in Japan, the lower average occupational expectations of females compared to males was associated with a lower proportion of females planning to go to four-year universities and their lower maths scores. In other countries, the higher averages of occupational expectations of females compared to males were related to greater proportions of females planning to go to universities and their higher reading scores.

Secondly, relationships with exo/macro factors related to female labour were analysed. The results indicated associations between the gender differences in occupational expectations and the gender equality landscape in each country. In other words, the large gender wage gap, low representation of women in managerial positions, short unpaid work hours by men, and positive attitudes toward housewives in Japan were related to the significantly lower occupational expectations of females compared to males.

The qualitative analyses involved interviewing 48 female university students studying in Japan and the UK. Consequently, it was confirmed that the Japanese students expected future occupations with lower socioeconomic status compared to their counterparts in the UK. It appeared that the lack of encouragement to pursue prestigious occupations by the parents of the Japanese students and the latter's strong reservations about work-life balance contributed to this.

Taking these insights into account, work-life balance policies between Japan and the UK were compared by reviewing government statistics and literature, particularly regarding the flexible work systems and their utilisation. The analysis indicated that, while both Japan and the UK have established systems to enable flexible working for all employees, the utilisation of the system was more universal in the UK.

The findings of this research suggest that the lower occupational expectations of Japanese females compared to Japanese males and females of other developed countries are due to persistent norms of gender roles and the challenging work environment. The gender gap in the aspiration to go to university and maths scores, as indicated by quantitative analysis, could potentially stem from gender biases and stereotypes. To address these issues, essential reforms involve transitioning to a norm where both men and women work and take care of the family, as well as enforcing more flexible work arrangements. Additionally, eliminating gender biases in school education and the media, along with strengthening education in life and financial planning to promote women's economic independence, is crucial. By implementing these measures, the occupational expectations of Japanese females could be elevated, which would facilitate the country in maximising their skills. This, in turn, could boost Japan's productivity, thereby contributing to a sustainable economy.

The limitations of this study are as follows. Firstly, the Japanese labour market operates under a "membership-type", which entails a more generalised perception of occupations, contrasting with the "job-type" characteristics of most other developed countries. Secondly, the sample sizes for the countries with appropriate gender equality indicators were limited to 32 to 36 countries. Therefore, caution is required in generalising relationships between the gender equality landscape and gender differences in occupational expectations. Additionally, the female university interviewees in Japan and the UK were likely to be more career-oriented than the average student. Moreover, as the nationality, race, and cultural backgrounds of the interviewees in the UK were diverse, interpreting cultural influences becomes complex. Future research could include longitudinal surveys tracking the occupational expectations of 15-year-old students and the actual occupations engaged at the age of 30. Based on the findings, it would be essential to carry out a detailed examination of the gender related factors that promoted or restricted females from pursuing their expected occupations.

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Translations and Abbreviations

Law, Institution, or Survey	Abbreviation	Japanese
Act on Advancement of Measures to Support Raising Next-Generation Children		次世代育成支援対策推進法
Act on the Arrangement of Related Acts to Promote Work Style Reform		働き方改革関連法
Act on Promotion of Women's Participation and Advancement in the Workplace		女性活躍推進法
Artificial Intelligence	AI	
Basic Plan for Gender Equality		男女共同参画基本計画
Basic School Survey		学校基本調査
Basic Survey of Gender Equality in Employment Management		雇用均等基本調査
British Broadcasting Corporation	BBC	
Cabinet Office	CAO	内閣府
Childcare Leave law		育児休業法
Childcare and Family Care Leave Law		育児・介護休業法
Classification of Occupations for Employment Services	ESCO	厚生労働省編職業分類
Comprehensive Survey of Living Conditions		国民生活基本調査
Employment Status Survey		就業構造基本調査
European Union	EU	欧州連合
Gender Equality in Employment Act		男女雇用機会均等法
General Survey on Working Conditions		就労条件総合調査
Gross Domestic Product	GDP	
International Social Survey Programme	ISSP	
International Socio-Economic Index	ISEI	
International Standard Classification of Occupations	ISCO	国際標準職業分類
information and communications technology	ICT	
Information technology	IT	
International Labour Organization	ILO	国際労働機関
Japan Standard Occupational Classification	JSOC	日本標準職業分類
Japan Student Services Organization	JASSO	日本学生支援機構
Labour Standards Act		労働基準法
Labour Standards Inspection Office		労働基準監督署
Labour Force Survey		労働力調査
Longitudinal Survey of Adults in the 21 st Century		21世紀成年者縦断調査
Longitudinal Survey of Newborns in the 21 st Century		21世紀出生児縦断調査
Long-Term Care Insurance Act		介護保険法
Ministry of Education, Culture, Sports, Science and Technology	MEXT	文部科学省
Ministry of Health, Labour and Welfare	MHLW	厚生労働省
Ministry of Internal Affairs and Communications	MIC	総務省
National Fertility Survey		出生動向基本調査

National Institute of Population and Social Security Research	IPSS	国立社会保障・人口問題研究所
National Institute for Educational Policy		国立教育政策研究所
National Survey of Family Income and Expenditure		全国家計構造調査
Nippon Broadcasting Corporation	NHK	日本放送協会
Office for National Statistics	ONS	
Ordinary Least Squares	OLS	最小二乗法
Organisation for Economic Co-operation and Development	OECD	経済協力開発機構
Programme for International Assessment of Adult Competencies	PIAAC	
Population Census		国勢調査
Programme for International Assessment of Adult Competencies	PIAAC	
Programme for International Student Assessment	PISA	
Public Opinion Poll on a Gender-Equal Society		男女共同参画に関する世論調査
Science, Technology, Engineering and Mathematics	STEM	
Socio-Economic Status	SES	
(National Survey of) Social Stratification and Social Mobility	SSM	社会階層と社会移動全国調査
Survey on Time Use and Leisure Activities		社会生活基本調査
United Kingdom	UK	
United States of America	USA	
Vital Statistics		人口動態調査
World Economic Forum	WEF	
White Paper on Gender Equality		男女共同参画白書
Work Life Balance	WLB	
Work Life Balance Charter		ワークライフバランス憲章
Work Style Reform Legislation		働き方改革関連法

Introduction: Background and Objectives

In recent years, the importance of women's participation in the workforce has grown significantly in Japan. This shift is driven by the country's declining population and a shrinking labour force. To address this challenge, the government has introduced various policies aimed at facilitating work-life balance (WLB) for parents. However, gender inequality persists in the labour market, characterised by significant disparities in wages and career opportunities for women. In light of this major concern, this research focuses on the occupational expectations of young Japanese females. The central theme of this study revolves around the findings that Japanese girls have lower occupational expectations compared to their male counterparts and girls in other developed countries.

This topic is relevant as research results show that young females with more ambitious educational and career plans tend to have an advantage over their counterparts with less challenging or unclear plans (see below). Therefore, the primary aim of this study is to analyse factors that influence occupational expectations and explore ways to address bottlenecks. The following section provides a concise overview of gender disparities in the Japanese labour market and outline the specific objectives and structure of this study.

Background

The Gender Gap Report 2023 by the World Economic Forum (WEF) (2023) ranks Japan as 125 out of 146 countries, below countries such as Angola, Kuwait, and Myanmar. Notably, Japan holds the lowest rank among the 19 East Asian and Pacific countries. Besides political empowerment, the gender gap is pronounced in women's economic participation, especially when compared to other developed countries. While Japan's female employment rate has reached 73%, surpassing the average of Organisation for Economic Co-operation and Development (OECD) members at 65% (OECD.Stat n.d.), according to Japan's 2023 Labour Force Survey, the proportion of women in non-regular employment among female employees remains notably high at 53% (Ministry of Internal Affairs and Communications [MIC], 2023a). Furthermore, full-time female workers earn only 78% of their male counterparts, a significant disparity when compared to, for instance, Belgium where female counterparts earn 99%. Additionally, the representation of Japanese women in managerial posts stand at 13% (in contrast to 46% in Latvia) and women comprise 22% of doctors (compared to 74% in Estonia or similar to Australia during the 1970s) (OECD 2021a; OECD.Stat n.d.; Power 1975).

Simultaneously, the family landscape is undergoing transformation, with increasing rates of divorce, unmarried women, single mothers, and female poverty, as shown in the Fifth Basic Plan for Gender Equality (Cabinet Office [CAO] 2022). Moreover, the traditional model of a husband as the sole breadwinner and the wife as a housewife has become unrealistic, primarily due to stagnant male salary levels that are no longer sufficient for a comfortable lifestyle (Maeda 2017). This shift could potentially explain the rise in women's labour force participation rates from 63% in 2010 to 73% in 2021, as previously noted (OECD.Stat n.d.).

As an illustration of inadequate salary levels, the 2019 National Survey of Family Income and Expenditure (MIC 2021) found that over 90% of unmarried males under 50 years old were earning less than ¥5 million in 2019, which falls short of the income single women typically seek in potential partners (Osawa 2015; Ueno 2021; Yamada 2015, 2016). Consequently, some single women still hope to become housewives, but the majority anticipate returning to work after temporarily leaving the workforce while their children are young, as indicated in the 15th National Fertility Survey (National Institute of Population and Social Security Research [IPSS] 2017). Specifically, the percentage of women who believe it is preferable to continue working

after having children increased from 26% in 1992 to 64% in 2019. Concurrently, findings from the 2018 Public Opinion Poll on a Gender-Equal Society reveal that the proportion of women and men who favour ceasing work after having children decreased from 43% to 20% during the same period (CAO 2019a). In this context, according to the Basic School Survey, the percentage of high school graduating girls enrolling in four-year universities has also risen from 32% in 2000 to 53% in 2022 (Ministry of Education, Culture, Sports, Science and Technology [MEXT] 2022a).

At the same time, Japan has been grappling with declining birth rates, a diminishing labour force, and a sluggish economy. Recognising the urgency to harness the country's human capital to support its aging society, the government has developed policies aimed at enhancing the WLB for parents, but notably women, over the past four decades. These policies encompass legislations such as the Gender Equality in Employment Act of 1986, the Childcare and Family Care Leave Law of 1992, and the Long-Term Care Insurance Act of 2002. More recently, the 2016 Act on Promotion of Women's Participation and Advancement in the Workplace has mandated that public entities and companies with over 300 employees assess the status of female employment, analyse areas for improvement, develop and publicise action plans with specific targets, and disclose pertinent information. (Ministry of Health, Labour and Welfare [MHLW] n.d.a). Furthermore, the Work-Style Reform legislation in 2019 is designed to curtail overtime work and enhance WLB (MHLW *et al.* 2021).

Lastly, the 2022 amendment to the Childcare and Family Leave Law has extended its coverage to men and non-regular employees, with large companies now mandated to publicly report childcare leave uptake statistics. Starting in April 2022, companies are also obligated to actively promote childcare leave among their employees, with a particular focus on expectant fathers. Moreover, as a strategic objective, the government is presently aiming to double the representation of women in leadership roles to 30% by 2030 (CAO 2020). Nevertheless, achieving this target may prove challenging, given the relatively small number of women in the existing pool of professionals.

Objectives of this Research

With this background, this research examines the occupational expectations of young Japanese students. Occupational expectations generally refer to the jobs they expect to have shortly after completing their education. In this study, the particular focus is on the socio-economic status (SES) associated with these occupations. The research shows that Japanese females tend to have lower occupational expectations in terms of SES when compared to males, as well as females in other OECD countries.

It is essential to note that higher educational or occupational expectations do not guarantee achievement. Research also indicates that girls have a tendency of lowering their expectations over time (Berger *et al.* 2020; Danziger & Eden 2007). However, young females with higher educational or career aspirations tend to have better prospects for achievement compared to those with less ambitious plans (Baird *et al.* 2008; Carpenter & Fleishman 1987; Gottfredson *et al.* 1975; Goldin *et al.* 2006; Hayashi 2012; Kan 2007; Lee & Rojewski 2009; Mello 2008; Reynolds *et al.* 2006; Sewell *et al.* 1980; Schoon & Parsons 2002; Schoon & Polek 2011; Shaw & Shapiro 1987; Yokoyama 2015). This means that girls who do not aspire to pursue challenging careers from adolescence could face difficulties in establishing a successful professional path later on.

In this context, data from the OECD's Programme for International Student Assessment (PISA) reveals Japan's unique situation among OECD countries. It is the only country where the average SES associated with the expected occupations of girls is notably lower than that of boys (see Chapter 3). Despite this, Japanese females consistently achieve top rankings in international competency tests such as PISA (refer to Chapters 3 and 4) and the Programme for International

Assessment of Adult Competencies (PIAAC) (OECD 2019a; Komatsu 2021). When competent girls aim low for their future jobs, they may become less inclined to pursue university education, especially at competitive institutions. This, in turn, could limit their options for securing quality employment and advancing their careers. Moreover, such a situation represents a significant loss to society, as it underutilises the potential of these high-achieving individuals. In Japan, the issue of low occupational expectations is particularly concerning, given the difficulties associated with changing or obtaining full-time jobs later in one's career (Nagase 2003; Nishimura 2014; Osawa 2015; Yamaguchi 2017).

As globalisation advances, Japan will face increasing challenges in global competitiveness due to its limited natural resources. To effectively address this, the nation must harness its abundant human capital to the fullest extent. Empowering women, who constitute half the population, to unlock their full potential in the labour market holds particular significance. This imperative is even more vital in today's context of an aging society, declining birth rates, and deepening fiscal deficit. As an illustration of the potential benefits of such empowerment, Yamaguchi (2017) finds that an increase in the number of university-educated female employees in companies results in higher hourly productivity for them, when there is a gender equality policy and a relatively high percentage of female managers.

Given these considerations, it is crucial for the government to further enhance policies aimed at empowering women and to improve implementation. Equally important is to encourage young women to aim for challenging careers and align their educational paths accordingly, especially during the phase when they are making critical decisions about their future. This perspective is just as, if not more, vital than solely concentrating on expanding the existing pool of female managers within the labour market or aiding mothers in re-entering the workforce after giving birth. Therefore, this research aims to investigate the factors contributing to the relatively low occupational expectations of young Japanese females, as these factors can significantly curtail their prospects for employment and career advancement.

Structure of this Research

This study encompasses both quantitative and qualitative analyses. The quantitative section in Chapters 3 and 4 involves international comparisons using multiple sets of uniform and nationally representative data. It provides statistics and explains variables associated with gender disparities in occupational expectations in Japan and other OECD countries. Conducting international comparisons offers insights into global trends, as well as socio-economic, political, cultural, and ideological factors that contribute to varying outcomes. Furthermore, it can lead to solutions for addressing challenges in female labour issues and learning from lessons in other countries.

The qualitative section in Chapters 5 and 6 presents comparative studies between Japan and the UK, integrating policy research and interviews. This approach serves to corroborate quantitative findings with real-life experiences of female university students. The policy analysis specifically explores WLB measures, offering context to understand the interviewees' aspirations for their future careers and family life in both countries. This in-depth examination between Japan and another country enables a nuanced understanding of cultural, societal, and policy factors that could potentially impact female occupational expectations.

The structure of this research is summarised in Table 0.1. Chapter 1 begins by providing definitions and contexts of the occupations explored in this study. It then reviews the literature on female occupational choices, which encompasses empirical studies, theories explaining the low occupational expectations of Japanese females, and an analytical framework categorising key factors influencing occupational expectations. The chapter also consolidates the key elements to

be addressed in each subsequent chapter and discusses the new contributions of this study to the academic literature. In Chapter 2, explanations of pertinent data from PISA, occupational classifications, and SES indicators are presented.

Chapters 3 and 4 feature quantitative analyses utilising PISA data to demonstrate that the future occupations expected by Japanese girls have notably lower average SES compared to those of boys. Specifically, Chapter 3 discusses the factors associated with individual characteristics and micro/mesosystems (explained in Chapter 1), such as parental education and occupation. Chapter 4, on the other hand, focuses on the exo/macro systems, exploring whether Japan's gender inequality in labour issues contributes to the relatively low occupational expectations of girls.

Chapter 5 presents information on universities and the labour market in the UK, particularly regarding flexible work measures and utilisation, as background for the interviews of students studying in the UK. Building on this, Chapter 6 provides qualitative analysis based on interviews with female university students in Japan and the UK. It specifically compares the influence of parents and perceptions of workplace issues to shed light on the lower occupational expectations of Japanese females relative to their counterparts in the UK. In the final chapter, the study summarises its findings, discusses policy implications, raises future considerations and study limitations, and proposes potential avenues for future research.

Table 0.1: Structure of this Research

Factors Lowering Occupational Expectations of Japanese females: - Results from International Comparisons -		
Background and objective of the study (Introductory Chapter) <i>Context and rationale for examining occupational expectations of Japanese females</i>		
Definition, literature review, and analytical framework (Chapter 1) <i>Foundational knowledge on female occupational choices</i>		
Data for the Research (Chapter 2) <i>Explanation of PISA, occupational classifications, SES, and gender equality indicators</i>		
Quantitative Analysis International Comparisons		Qualitative Analysis Comparison with the UK
Individual and parental factors using PISA data (Chapter 3)	Gender equality landscape factors using PISA and other data (Chapter 4)	Universities and labour market characteristics (Chapter 5) Interviews focusing on individual characteristics, parental influences, and workplace issues (Chapter 6)
Summary and Discussion (Concluding Chapter) <i>Findings, policy implications, future considerations, and limitations of the study</i>		

Chapter 1: Definition, Literature Review and Analytical Framework

This chapter begins by providing a basic description of the study. It defines occupational expectations and briefly discusses the differences between occupational expectations and aspirations. The chapter then presents a few examples of surveys conducted in Japan that list some future occupations chosen by girls and boys. Following this, the chapter explores prior research and relevant theories that help explain the phenomenon of low occupational expectations among Japanese females. It then introduces a conceptual framework designed to categorise the factors influencing occupational choice. Finally, the last section situates the theories within the empirical analyses of Chapters 3, 4 and 6 and discusses the contribution of this study to academia.

Definition and Illustration

Definition of Occupational Expectations

In this study, 'occupational expectation' refers to the occupation that a young individual anticipates having shortly after completing her or his education. These expectations encompass the occupations they intend to pursue as long-term career paths, in contrast to short-term or part-time jobs, such as those undertaken to save for graduate school expenses. A comprehensive discussion on the definition of occupation itself and its classification can be found in Chapter 2.

In certain academic literature, occupational expectations are clarified in a more comprehensive manner as:

cognitive patterns of the individual that include self-perception of occupational future identities, understanding of one's own abilities, possible place in the world of employment, existing and potential connections, and unique role. Occupational expectations are translated into academic achievements during adolescence. They also constitute a critical variable later in accessing opportunities in the labour market. Longitudinal studies demonstrate how occupational expectations predict occupational achievements in adulthood, and how they mediate the effect that a weak socioeconomic background has on academic achievement (Effective Research for Impact Institute n.d.).

This statement underscores the complex dimensions of occupational expectations, encompassing elements of psychology, education, employment, and equity issues. Consequently, this research dissects some of these aspects to understand the factors shaping females' career and life plans through occupations and discusses their ramifications on society.

Occupational Expectations versus Aspirations

'Occupational expectation' differs somewhat from 'occupational aspiration' which pertains to an occupation that young individuals *aspire* to have. While 'aspiration' can denote a job that young people hope to secure or a potentially unachievable dream, 'expectation' is generally perceived as more realistic, representing an occupation that takes into account social constraints. Several studies have explored the distinction between occupational aspirations and occupational expectations to examine the obstacles in realising these aspirations. For instance, Saha (1997) and Sikora & Saha (2011) discover that many students in Australia from disadvantaged backgrounds have expectations that fall below their aspirations due to limited access to resources and opportunities.

As the occupations that youths *expect* to have are generally closer to the occupations they realise in the future than those they *aspire* to have, this research primarily focuses on 'occupational

expectations.’ In addition, the relevant question in the PISA data asks students, “What kind of job do you *expect* to have when you are about 30 years old?”. Taki (2011a, 2011b), who also analyses PISA data to investigate the future educational and occupational choices of students, employs the term ‘expectations’ instead of ‘aspirations.’ Nevertheless, it is important to note that the distinction between occupational expectations and aspirations in the literature is not always straightforward and even used interchangeably. For example, a study by Schuette *et al.* (2012) on ‘career aspirations’ asks middle school students to name jobs that they “might like to have in the future”. Staff *et al.* (2010), in their study on ‘occupational aspirations’, inquire with 16-year-olds about the job or occupation that they “expect or plan to have” when they are 30 years old. Furthermore, Looker & Magee (2000) use terms like occupational ‘expectation’, ‘aspiration’, ‘plans’, ‘decisions’, ‘decision-making’, and ‘preferences’ interchangeably in their work.

Thus, the term ‘occupational expectations’ is used in this literature review to cover studies that deal with occupational choice more broadly. In particular, the main interest here is the gender differences in occupational choice. Since expectations or aspirations are highly correlated with attainment (Marini & Greenberger 1978; Saha 1997), they are all relevant in analysing the contrast between females and males. Furthermore, the term ‘aspiring lawyer,’ for example, is used in Chapter 6 instead of ‘expectant lawyer’ because the former expression is commonly used in conjunction with occupations.

Surveys on Occupational Choice in Japan

To illustrate some occupations that Japanese girls and boys envision for the future, Table 1.1 lists the results of surveys carried out by many private entities.

Table 1.1: Examples of Surveys on Occupations that Youths Envision in Japan

#	Organisation	Year	Top Occupations		Sample
			Girls	Boys	
1	Sony Life	2021	civil servant, nurse, teacher, entertainer, childcare worker	YouTuber, entrepreneur, (information technology (IT) programmer, civil servant, teacher	800 high school students through internet research
2	Dai-Ichi Life Insurance	2023	company worker, civil servant, nurse, teacher, kindergarten teacher/childcare worker, hairdresser, pharmacist, IT engineer, academic, doctor, chef	company worker, civil servant, IT engineer, teacher, academic, doctor, architect, game creator, YouTuber, soccer player	High school students from 3000 samples that include elementary and junior high school students through internet research
3	Benesse	2021	nurse, local civil servant, programmer, system engineer, childcare worker, pharmacist, nutritionist, psychological counsellor, high school student, singer, game creator		515 high school students through web survey
4	Shibuya Trend Research	2023	company worker, YouTuber, civil servant, hair/make-up artist, cabin attendant/pilot, entertainer/model, IT programmer, film producer, entrepreneur		100 high school students through web survey

5	Top Athlete (Hello Work for 13-year Olds)	2023	clinical psychologist, athlete, hair stylist, YouTuber, civil servant (general administration), librarian, medical doctor, nature observation instructor, illustrator	Number of accesses for each occupation by junior and senior high school students
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Source: Sony Life (2021), Dai-ichi Life Insurance (2023), Benesse (2021), Shibuya Trend Research (2023), and Top Athlete (2023)

While some surveys do not distinguish the occupations chosen by gender, it is relatively easy to infer which ones are selected by girls or boys, especially by referring to the surveys that did. Among girls, many occupations are traditional, stable, and require qualifications in paramedical, educational, and caregiving fields, such as nurse, pharmacist, teacher, and childcare worker. There is also significant interest in the entertainment industry, such as singer and actress, as well as the beauty industry, including occupations like hair stylist or makeup artist. In contrast, boys exhibit strong interests in entrepreneurial and technology-related occupations, such as entrepreneur, YouTuber, IT programmer, and game creator. Additionally, there is a prevalence of intellectual professions that demand high qualifications, like researcher, doctor, and architect, which are less visible among girls.

At the same time, it is also notable that many girls and boys choose generic job positions such as civil servant and company worker, which are not exactly distinct occupations. This is presumably influenced by the characteristic of the Japanese labour market, where employers tend to hire generalists and assign employees to different tasks, as opposed to hiring specialists in specific occupations, which is discussed below.

Literature Review

This section reviews literature on occupational choices, with a particular emphasis on females. It encompasses international studies as well as research specific to Japan. Key topics include the influence of social class, notably through parents' occupations and their functions as encouragers or role models. The discussion also draws insights from multi-country studies and highlights recent trends revealing higher occupational expectations among females compared to their male counterparts.

International Studies on Occupational Choice

Social Class Effects on Occupational Expectations

Theories and research on factors that influence occupational choice initially concentrated solely on men. It started with the path model developed by Blau & Duncan (1967), which established that the father's education and occupation are transmitted through the son's education and eventual occupation. Subsequently, the Wisconsin Model, proposed by Sewell *et al.* (1970), introduced a socio-psychological component to expound on how the father's education and occupation influence the son's attained occupation by way of his academic aptitude and occupational aspirations. This model has become one of the foundational theories for career development.

The Wisconsin Model, however, took time to be applied to women. This delay was due to the relatively low number of women in the labour force during the 1960s-70s, particularly after marriage and childbirth. Some studies included females, but they did not specifically investigate gender differences. For instance, research by Schoon & Parsons (2002) examines 15-16-year-old boys and girls in the UK during the early 1990s. Their findings indicate that family social class, assessed by a composite measure of the higher of the parents' education and occupation, is positively associated with career aspirations of adolescents. In essence, individuals from higher

social class backgrounds are more inclined to aspire to professional or managerial careers. Moreover, after accounting for academic achievement and family background, the study reveals that career aspirations are predictive of subsequent occupational outcomes. To be specific, both males and females who aspired to professional or managerial careers were more likely to attain such positions, while those who aspired to manual or routine jobs were more likely to find themselves in those types of occupations.

The aforementioned studies demonstrate the intergenerational transmission of social class. This phenomenon occurs because parents with higher levels of education, greater income, or elevated SES typically possess access to diverse resources and opportunities that can shape their children's educational and occupational choices. These resources may encompass: financial resources that can provide children with better education, tutoring, extracurricular activities, technology, healthcare, and nutrition; social capital that can provide children with valuable information, networking, and access to internships and career opportunities; and cultural capital that can expose children to artistic and intellectual activities, sports events, travel experiences, and encounters with different societies. In addition, highly educated parents often set higher expectations, provide academic support, and offer guidance during college applications, which boost their children's academic and career achievements. Finally, parents with higher SES have access to individuals in prestigious occupations within the family or social circle, motivating their children to pursue similar career paths (Davis-Kean 2005; Dufur *et al.* 2013; Haveman & Wolfe 1995; Lareau 2002; Sirin 2005).

Parents' Occupational Influence on Females

Eventually, studies exploring female occupational expectations emerged, particularly examining relationships between daughters and mothers. However, in the earlier days, only limited research indicated a significant influence of mothers' occupation on daughters' occupational expectations or achievements, possibly due to the small share of mothers in the workforce or with professional careers. For example, Marini & Greenberger (1978) reveal that, in the 70s, the occupational prestige of mothers had less impact on the occupational ambitions of American high school girls compared to that of fathers. This difference was largely owing to the prevalence of housewives among mothers during that period.

Similarly, Vella (1993, 1994) observes that during the 1980s in Australia, when parents had high education levels and mothers worked, daughters became more progressive in their views on work, and their educational levels also increased. However, this did not significantly affect their actual occupational achievements. Marini & Fan (1997), examining young American adults in the 1980s, identify gender differences in the social class effect on occupational aspirations: boys with parents in high-paying and high-status occupations were more likely to aspire to similar careers, while girls did not exhibit the same tendency.

A comparative study conducted by Vondracek *et al.* (1999) among adolescents in Germany in the 1990s also reveal that the influence of mothers' occupational types (technical, sales, education, trade, banks, administration, and health) on their daughters' career preferences was contingent upon the regional social context of Western versus Eastern Germany, including the latter's gender equality norms fostered during the Communist period. More recent studies in the United States of America (USA), such as Schuette *et al.* (2012) and Moakler Jr. & Kim (2014), similarly do not identify significant relationships between mothers' male/female-dominated or science, technology, engineering and mathematics (STEM) occupations and their job status (professional, skilled, and unskilled) with respect to girls' aspirations. Additionally, a large-scale longitudinal study in Finland by Erola *et al.* (2016) finds that, instead of the parents' occupation or income,

their education, and particularly that of the father, has a more substantial effect on daughters' occupational expectations.

At the same time, a growing body of research has demonstrated the influence of mothers' occupations on their daughters' occupational aspirations. For example, Gutman *et al.* (2014), examining 14–19-year-olds in the UK in the mid-2000s, find that higher levels of education and higher-status occupations of both fathers and mothers are associated more with higher aspirations among girls than boys. Polavieja & Platt's (2014) longitudinal and nationally representative study in the UK adds further nuance, revealing that girls who have mothers in sex-atypical (male dominated) occupations, which generally have higher wages, are more likely to aspire to sex-atypical occupations than girls whose mothers have sex-typical (female-dominated) occupations, which generally have lower wages.

Thus, findings reveal a mixed picture regarding the influence of the parents' occupations on the daughters' occupational expectations, particularly of the mothers. It is possible that a stronger connection has emerged over the last decade, aligning with the trend of more mothers pursuing challenging occupations and actively building their careers. Additionally, while mothers' occupations may not strongly influence their daughters' specific occupational choices, they may still impact their overall career plans, such as the decision to continue working after marriage or childbirth (Saha 1982; Schuette *et al.* 2012; Looker & Magee 2000; Rainey & Borders 1997; Vella 1994; Stitt-Gohdes 1997; Katase 2005; Nakao 2011; Motohama 2014; Matsumoto 2008; Muramatsu 2000; Genji 2004; Maeda 2017). On the other hand, factors like career development prospects in the workplace and WLB conflicts can also play a role in these decisions. Therefore, gaining a comprehensive understanding of occupational expectations of young females requires an examination of factors beyond parental influence, including societal norms and labour market conditions.

Parental Encouragement on Female Occupational Choice

Aside from the influence of parental education and occupations, some recent studies highlight the proactive role that parents play in shaping their daughters' occupational expectations. These studies suggest that parents' beliefs, values, and expectations regarding their daughters' achievements can impact their career choices and academic pursuits. The results indicate that parental encouragement and support, particularly for non-traditional careers like STEM, can have a positive effect on females' career aspirations. On the other hand, they also suggest that gender stereotypes and societal norms held by parents may also restrict females' career choices and hinder their pursuit of non-traditional careers.

For example, Martin *et al.* (2014) discuss parental encouragement and support regarding the subject areas for their children to study, which can lead to specialised occupations. In their survey of students studying engineering at two US universities, they categorise the role of parents as follows: being supportive of engineering, instilling the legacy of family members who are engineers, providing knowledge about college and career options in general, facilitating engineering-related opportunities, and being unsupportive of studying engineering. While this study does not explicitly differentiate between genders, with 64% of the sample being female, the data suggest that the differences in results are not primarily linked to the student's gender; instead, they are more closely related to the educational background of their parents.

Additionally, the longitudinal national study among US high school students by Wang *et al.* (2017) finds that parental encouragement to study maths or science has significant effects on students' pursuit of STEM occupations, regardless of their performance in verbal, maths, and science subjects. This research sees no gender related *effects* of parental encouragement on the pursuit of STEM occupations, although it is unclear whether there is gender-differentiated

encouragement by the parents. However, the study acknowledges the necessity for future research to explore the effects of parental encouragement towards non-STEM areas as well, such as literature or the arts, in order to enhance the predictive validity of factors contributing to children's selection of STEM occupations. This type of investigation has the potential to bring out gender-related aspects more clearly.

Multi-Country Studies

Several recent multi-country studies examining gender differences in occupational expectations yield common findings. Firstly, these research observes significant gender differences in occupational expectations across countries: boys tend to be more interested in science and engineering, while girls are more likely to expect careers in the healthcare and social services field. Secondly, they find that gender differences in occupational expectations are influenced by cultural values and beliefs regarding gender roles in each country.

Some of these studies are based on PISA data; for example, Sikora and Saha (2009) utilise PISA 2006 data and the average proportion of women in the labour force as a proxy to correlate girls' occupational expectations with labour market opportunities and gendered norms. Analysing the same data, Sikora & Pokropek (2011) demonstrate that, among STEM disciplines, regardless of aptitude in science, girls generally expect lower-paid health sector occupations while boys expect higher-paid engineering occupations. More recently, with PISA 2018 data, Stoet & Geary (2022) affirm that girls still choose people-oriented occupations – such as nurses – and boys prefer things-oriented occupations – such as mechanics – across countries, consistent with studies found in the USA a century ago.

Recent Trends in Higher Occupational Expectation of Females

Literature in the last two decades show that female occupational expectations have risen in terms of higher SES compared to the past and also relative to boys (Al-Bahrani *et al.* 2020; Francis 2002; Inoue-Smith 2014; Looker & Magee 2000; Schoon & Parsons 2002; Schoon & Polek 2011; Watts *et al.* 2015), particularly in the Anglo-Saxon countries of Canada, UK and USA. These studies attribute this phenomenon to socio-economic changes, particularly in the industrial and service sectors, as well as increases in female education, equal job opportunities, returns to investment in human capital, female labour force participation, role models such as working mothers, divorce rates, single-parent families, and childcare measures (Baird 2008; Francis 2002; Looker & Magee 2000; Schoon & Polek 2011; Thévenon 2016). However, in Japan, hardly any study so far shows that occupational expectations of females have become higher than or even close to that of males, except in a small sample at a national university (Inoue-Smith 2014).

Studies in Japan on Occupational Choice

Many studies on female labour issues in Japan adopt a life course perspective rather than focusing on specific types of occupational choices (Anzai & Paik 2012; Imada 1996; Muramatsu 2000; Nakayama 1985; Takahashi & Nakagami 2007; Takamatsu *et al.* 2023; Wakita 2009; Zhou 2013). Consequently, a significant portion of research on career plans addresses topics such as work patterns, contractual categories, and values associated with work. These subjects include females' plans to continue working after marriage or childbirth, their preference for full-time or part-time employment, contractual arrangements, and so on. Therefore, only a few studies examine parental influence on their daughters' choices for concrete occupations. When they do focus on occupations, they are generally categorised broadly, such as technical, administrative, and manual work. The following examples highlight the few.

Social Class Effects on Female Occupational Expectations

Parental influence on occupational aspirations can be examined through the lens of social class. Katase (2005) observes that when fathers hold skilled occupations, it positively influences their

daughters' aspirations for skilled careers. Nakao (2011) clarifies that a father's education impacts a son's education, which, in turn, influences his occupation. However, in the case of daughters, the father's education can directly impact their chosen occupation without necessarily affecting their education. Some studies also consider the effects of mothers, but given that social class in Japan is typically represented by the father's education, occupation, and income, investigating the mother's education or occupation as factors influencing a daughter's career choice may not directly pertain to the study of social class effects. Nevertheless, Nozaki (2010) discovers that the son's chosen occupation was influenced by the father's occupation, whereas the daughter's was not. If at all, her employment pattern was somewhat influenced by her mother's work pattern. Furthermore, Motohama (2014) demonstrates that a mother's education has a weak but positive impact on her daughter's occupational prestige. Similarly, Miyamoto (2020) utilises PISA 2015 data to show that fathers' occupations significantly influence the expected occupations of sons more than daughters, whereas mothers' occupations do not exhibit a differential impact on the expected occupations of either daughters or sons (see Box 3.1 in Chapter 3).

Parental Encouragement on Female Occupational Choice

Other studies in Japan investigate the influence of parental guidance on their children's career choices. In particular, how parents perceive whether their daughter should attain her social status through her own merit or through marriage will influence the type of support, guidance, or pressure given to the daughter, potentially impacting her occupational choices (Kanai 2007). Examining historical trends, Hama (2018) illustrates that before the war, mothers often encouraged their daughters to become housewives rather than pursue careers. This pattern has shifted as more women have entered the labour market. However, contemporary parents still tend to steer their daughters toward careers in education and healthcare, while setting higher expectations for their sons.

Since the 21st century began, Kanai (2007) finds that parents of female college students in Hokkaido encouraged their daughters to have an income and achieve some social status. However, they preferred occupations that were considered suitable for women, such as teaching, and expected them to prioritise child-rearing and housework. On the other hand, many girls in this study opted for careers in the beauty industry, despite the absence of parental encouragement specifically for these types of occupations. Other studies investigate the varying impacts of parental encouragement based on whether it came from the father or mother. Matsuda & Maeda (2008) demonstrate that among female college students at Hiroshima University, the father's expectations for careers in self-employment, research, or teaching correlate with a higher level of interest in those fields. In contrast, the mother's expectations for self-employment or teaching do not generate a similar level of interest.

More recent surveys through internet show that the top occupations that Japanese parents hoped their sons will pursue include (aside from civil servant and company worker) medical doctor, IT programmer, researcher, pharmacist, entrepreneur, teacher, YouTuber, athlete, police officer, fire fighter, engineer, and driver. For daughters, the preferred occupations include pharmacist, nurse, pâtissier, medical doctor, childcare worker, teacher, actor/singer/model, IT programmer, and designer (ReseMom 2020; Nihon Trend Research & Aoyamarajubo Clinic 2022). While some of these occupations can be considered gender-neutral, such as pharmacist, teacher, and actor/singer, many of the occupations for boys are male-dominated, and those for girls are female-dominated. A notable exception of a traditionally male-dominated but prestigious occupation that parents prefer for girls is a medical doctor.

Parents as Role Models

As mentioned above, most research on female labour issues in Japan focuses on contractual categories or values associated with work rather than specific occupations. Consequently, there

are relatively few studies examining whether parents, particularly mothers, serve as role models for their daughters in terms of occupational expectations. Notably, Nakayama (1985) points out that mothers are rarely considered occupational role models due to their predominantly housewife roles. However, exceptions exist, such as in a small sample studied by Ogawa & Tanaka (1980), which reveals that mothers who are medical doctors have more influence on their daughters' aspirations to become doctors compared to fathers who are doctors.

Moreover, contemporary research, including that of Genji (2004), indicates that when mothers hold professional occupations, a higher proportion of daughters choose professional careers. A more detailed study by Kanai (2007) shows that if mothers work as civil servants or teachers, girls are more likely to opt for the same types of jobs, especially in comparison to boys. Additionally, the 2018 White Paper on Gender Equality indicates that when mothers have science degrees, the number of daughters planning to pursue careers in the sciences is twice as high as those with mothers holding humanities degrees (CAO 2019b). Therefore, although it is not entirely clear whether these effects result from social class, direct encouragement, or the presence of role models, one can speculate that mothers may have some form of role model influence on their daughters' occupational expectations.

Theories Related to Female Occupational Expectations

This section outlines three theories relevant to understanding the relatively low occupational expectations of females in Japan. The first theory pertains to the concept of circumscription and compromise, which describes how children restrict their occupational expectations by considering the opportunities and constraints associated with their choices, influenced by factors such as gender and social class. The second theory focuses on how females tend to gauge their social status based on factors external to themselves, such as their husband's occupation, rather than their own. The third theory explains that Japanese labour practices are still based on an institutionalised model of gender role division. The following describes each of the theories.

Circumscription and Compromise

Gottfredson's Theory

Gottfredson's theory (1996, 2002) hypothesises that young individuals start constraining their career choices by opting for occupations considered suitable for their gender and social class. This theory suggests that youths perceive themselves and form their self-concept as individuals within the societal context. It elucidates how children's career selection evolves with their changing understanding of the world of work, various jobs, and occupational positions, as explained by Truyens (n.d.).

The theory elaborates on two major concepts in the process of elimination. **Circumscription** involves the limits children impose on themselves based on self-concept, such as being a girl. In other words, they rule out possibilities of careers that may appear too masculine for them or in societal terms. They learn to see certain tasks as 'suitable' for them and others as 'not suitable'. This, in turn, influences their self-concept. Within their suitable career options, children will **compromise** and select those that are most available to aim for in their social environment rather than their ideal careers that may not be as available. They compromise their ideal choice with what is practical.

There are four stages according to the general development stages of the children.

Stage 1 (age 3-5): Children realise that they cannot change their gender or become a fantasy character. They classify people in simple ways like big and strong versus weak and small. They also understand that they will become adults one day and possibly have a job.

Stage 2 (age 6-8): Children recognise highly visible occupations, such as those with uniforms, teachers, and their parents' professions. They start making distinctions that certain occupations belong to a certain gender.

Stage 3 (age 9-13): Children begin to conceptualise occupations they cannot directly see. They become aware of status hierarchies and social evaluation by friends or wider society. They understand links between income, education and occupation. They also realise that family expectations or social class influence acceptable occupations and start ruling out occupations they would find too difficult to achieve based on their academic ability or gender, which is part of circumscription.

Stage 4 (age 14+): At this stage, children search among the occupations that are compatible with who they are. They struggle to understand their interests, abilities and goals as these aspects are still being developed. They become aware of actual routes, details of jobs, and the qualifications and training required to pursue their chosen occupations.

Based on this theory, the social environment in which youths are placed may determine the extent to which circumscription and compromise play a role in their occupational choices. This can vary depending on whether the occupations in that environment are gender-segregated or mixed. For instance, young females who have been exposed to both female and male doctors may not eliminate the possibility of becoming a doctor from their expected occupations. On the other hand, those who primarily observe male doctors and female nurses may aspire and expect to become a nurse but not a doctor. In essence, the degree of circumscription and compromise based on gender may depend on the availability of role models that allows young women to either easily envision themselves in a particular occupation or not.

Given this context, the current research focuses on Stage 4, particularly of high school and university students who are on the brink of entering the workforce. This stage represents a critical juncture where these young individuals shape their future career paths, exploring their interests, abilities, and aspirations. It is a phase where they gain a deeper understanding of various occupations, required qualifications, as well as limitations. The influence of role models and the social environment becomes significant, impacting their perceptions of what is achievable based on gender and/or social class. Importantly, Stage 4 presents an opportune moment for educators, parents, and policies to offer support and corrective measures that can influence these youths' occupational choices before they enter the workforce.

Studies on Applying Gottfredson's Theory

Several recent studies have explored gender differences in occupational expectations, using Gottfredson's theory as a framework for understanding how personal factors and societal norms related to gender shape individuals' career outlook. For example, research by Stuth (2023) among adolescents in upper secondary school in Germany tests how occupations are eliminated based on Gottfredson's theory. It discovers that students exclude occupations that do not fit with the three concepts of self – gender, social class, and vocational interests, in that order. For example, females from higher socio-economic backgrounds who have interests in vocations in buildings or mechanics eliminate related occupations because they are male-dominated and are not generally of their social class.

Berge *et al.* (2020)'s longitudinal study of students aged 8 to 18 in Australia from 2012 to 2015 shows that both girls and boys begin to have less ambitious career aspirations as they progress to high school. This finding support the theory that girls and boys continue to favour occupations with gender-typical compositions, aligning with Gottfredson's theory of Circumscription and

Compromise. However, Oliveira *et al.* (2020) argue that Portuguese boys aged 10 to 12 experience greater gender circumscription than girls. They contend that when fathers hold female-dominated jobs, more boys expect to have such jobs compared to girls. Conversely, when fathers have male-dominated jobs, fewer boys expect female-dominated jobs than girls. The extent to which this represents an undesirable choice or compromise for boys is open to debate, as female-dominated jobs often come with lower pay and limited advancement opportunities.

As an example of a study in Japan, Adachi (2012) references Gottfredson's theory to present findings that show gender disparities in STEM career interests. For instance, males exhibit a higher level of interest in occupations related to technology, engineering, and IT, as well as a greater inclination towards practical jobs like machinery operation and repairs, which align with Gottfredson's research. Conversely, the study finds that, while more males are interested in practical occupations within biology, chemistry, pathology, astrology, and zoology, no significant gender differences exist in research-related occupations in these areas.

The study also examines daily activities in which children participate, revealing that boys and girls often engage in pursuits that conform to traditional gender roles. This, in turn, contributes to the gender disparities observed in STEM occupations. As a result, the author recommends promoting and encouraging activities that enable children, irrespective of their gender, to explore a broader range of experiences, as this could play a vital role in reducing the gender gap in STEM professions in Japan.

Kamise (2008) also affirms the applicability of Gottfredson's theory in Japan, maintaining that occupational images comprise two dimensions: prestige and gender. Within this framework, she states that variations in how specific occupations are perceived based on gender influences individuals' interest in pursuing those careers, subsequently shaping their job-seeking behaviour. To investigate this, she conducted a survey among Edo University students to assess their perception of the *salary man* occupation. Her findings reveal that this image predominantly depicts males in lower or middle management roles, lack specificity in job tasks beyond sales-related activities, and generally carry a negative connotation due to factors such as long work hours and fatigue. Furthermore, it is observed that most respondents do not aspire to become a salary man. The study acknowledges its limitation in failing to explore the translation of these images into actual job-seeking behaviour. In particular, many Japanese youths still pursue the path of becoming a salary man, which could be due to lack of alternatives and constraints in their career choices.

Women's Social Status Dependency

To comprehend the relatively low occupational expectations of Japanese females, it is essential to examine how they perceive their occupations in relation to their social status. This requires an initial review of how society objectively determines social status, encompassing income, education, and occupation, which can impact subjective social status. Subjective social status, in turn, is rooted in an individual's perception of their standing relative to others in society. By scrutinising both objective and subjective dimensions of social status, a deeper understanding of the interplay between subjective social status and occupational expectations among Japanese women can be attained. Specifically, the discussion revolves around how women position their occupations within the framework of their social status, as it is presumed to influence the occupational expectations of young women.

Objective Socio-Economic Status of Households

This section discusses different types of objective measurement of social status of households. It elaborates on the international debate that took place in the 1970s and 1980s, as described by Wakita (2013). First, Acker (1973) criticises the traditional perspective that views women's

status solely within the framework of a family member, whose social standing is determined by the man as the head of the household. This critique emerged in the 1970s when American society was undergoing changes with the rise of women's employment. In response, Goldthorpe (1983) counter this argument by highlighting that during the same period in the UK, most married women ceased working after childbirth. Even if they returned to work, they primarily took up part-time positions that required lower skills compared to those of their husbands. Therefore, he defends the Conventional View or the Status Dependency Model, asserting that it is not inappropriate to categorise women as belonging to a social class based on the occupation of the man as the household head. He particularly notes, following Mincer (1962) and the later Douglas-Arisawa principle (Tsumimura *et al.* 1959), that women's employment years tend to decrease as the status of their husband's occupation increases.

On the other hand, Erikson (1984) demonstrate that during the same period in Sweden, choosing the occupation with the higher social status between the couple has a more significant correlation with the household's standard of living than selecting either the husband's or the wife's occupation individually. This concept is known as the Dominance Model. Additionally, Heath & Britten (1984) introduce the Joint Classification Model, which postulates that consideration of both the wife's and the husband's occupations provides a better explanation of household fertility rates in the UK. They argue that, despite the intermittent nature of women's employment, since the wife consistently pursue similar occupations throughout her life, there is no issues in analysing both occupations, contrary to Goldthorpe's earlier critique.

The above debate on the social status of women and men occurred in countries like the USA, UK, and Sweden, primarily before the 1990s when women's participation in the workforce was not as advanced as it is today. Hence, the suitability of either model depends on the state of female employment in a particular country for a particular period. In essence, the appropriateness of the Dominance Model or Joint Classification Model may be relevant in countries where women enjoy more socioeconomic independence and equality with men. However, in nations where gender equality in the labour market lags behind, the Conventional View or Status Dependency Model which links the wife's social status to the husband as the head of the household, may still remain applicable.

For example, a recent large-scale longitudinal study by Erola *et al.* (2016) in Finland shows that the social status of both mothers and fathers matter to children's occupational outcomes. However, the fathers' influence explains approximately half of the variation, while the mothers' accounts for slightly less. It notes that the characteristics of mothers and fathers vary at different stages since mothers work and earn less than fathers when the children are young, but they fully return to the labour force as they grow older. The authors therefore caution that ignoring the effects of different parental background indicators at different ages during childhood and youth could lead to biased conclusions. Thus, in countries like Finland, a Joint Classification Model should be applied to parents as well as in interpreting the results of occupational expectations of young females.

In Japan, a family system is in place that designates only one person as the head of the family, a role predominantly represented by a male, fostering the Dependency Model, where the wife's status is intricately linked to her husband's. In other words, the family registration, tax and social security systems designate one person as the head of the family, even where the household consists of a married couple. The government has established this system to manage the family's income, expenses, national health insurance, pension, and long-term care insurance in a centralised manner. It also assumes that one of the couple is the main earner while the other is a dependent who either does not have an income or earns much less. While, legally, the head of the

household is gender neutral, traditionally, the default has been set to males. Even in 2019, according to the National Survey of Family Income and Expenditure, 89% of households with more than two people were headed by males (MIC 2021).

In this context, the National Survey of Social Stratification and Mobility (SSM), a social survey conducted every ten years since 1955 by Japanese sociologists, covering topics such as social stratification, inequality, social mobility, occupation, education, and social consciousness, had not included women in the surveys until 1985 (Wakita 2013). Furthermore, even in the most recent SSM of 2015, while the questionnaire requests information on the father's occupational status when the respondent was 15 years old and until the present, it only inquires about the mother's occupational status only when the respondent was 15 years old (SSM 2015). This persistent gender bias in the survey's data collection indicates a devaluation of women's occupational experience in examining social stratification and mobility, reflecting societal norms.

On the other hand, many recent studies take into consideration mothers' occupations when examining children's occupational choices. For example, Miwa (2011), using the SSM 2005, demonstrates that incorporating both the mother's and father's occupational types enhances the predictability of the daughter's achieved occupational type. Furthermore, Shirakawa (2018) uses the SSM 2015 data to reveal that the transferability of the father's occupational type to the daughter's is limited, unlike the son's. In the case of the mother, if she holds a professional occupation, the transferability is substantial for daughters. Additionally, while the impact of the mother's occupation diminishes over time and the influence of the father's grows stronger for daughters, the change is minimal for sons.

While the focus of this thesis is on gender differences in occupational expectations and not on social mobility *per se*, the results of these studies, which show that, the mother's occupation has an effect in explaining the occupational choices of daughters, is relevant. In other words, they suggest that, in examining occupational choices, the Joint Classification Model is more applicable for Japanese females, although Goldthorpe's Conventional View can be applied to Japanese males.

Women's Perception of their Social Status

The evolving landscape of women's social status is a multifaceted phenomenon observed across different countries. In exploring this topic, it becomes apparent that women's subjective social standing is also undergoing significant transformation parallel to changes in their roles and identities. Notably, the USA showcases a progressive shift, where women increasingly link their identities to their occupations, challenging traditional notions of work as a financial need. In contrast, Japan experiences a slower evolution, with women still largely associating their social status more closely with their husband's standing, although some nuancing is needed for the diverse types of women.

Changing Dynamics in the USA

In the USA, alongside the transition towards the Joint Classification Model of objective social class, women's subjective social status is also undergoing changes. For example, Goldin (2006) discusses the transformation of American women from the late 1970s, highlighting their increased attachment to their occupations, stronger identification with their careers, and the ability to make joint decisions with their spouses. This shift signifies a move from working out of financial necessity to working because employment and the occupation define a woman's fundamental identity and social status. In particular, marrying later allowed their identity formation to precede marriage. Conversely, leaving the workplace became associated with a loss of identity for women, with economic independence gaining more importance due to factors such as increased divorce rates. These changes have led women to invest more in education and prioritise careers alongside or even ahead of marriage in their identities.

Akerlof & Kranton (2010) also explain that, in the 1960s, the ideal for a middle-class American woman was to become a suburban housewife, with wives of high-earning husbands much less likely to hold a job. However, more recently, little relation is seen between husbands' income and wives' employment. This shift occurred because women's careers became an important part of their identity and social standing in the USA. The authors thereby challenge traditional economic theories of human behaviour by introducing the concept of identity economics, arguing that occupational and career decisions of American women are not solely based on financial incentives. In other words, women now make occupational choices based on their perceived identity and the societal expectations placed upon them, beyond prospects for household income.

Japanese Women's Social Status Dependence on Husbands

However, this transformation is taking time in Japan. Research has suggested that women often associate their social status more closely with factors such as marriage, children, and their husband's social standing, rather than their own occupation. This is in contrast with men who tend to link their social status with occupational prestige (Genji 2004; Inoue-Smith 2014; Kanbayashi 2006; Shirahase 2004; Wakita 2009).

To elaborate, Yamato (2008) shows that women's identification of their social class increases with their husband's income, educational level, and occupational prestige, as well as household assets, more than with their own education and income. Even within the husband's status, there are different dimensions that are important. Using the SSM 1995 data, Yamaguchi (1999) finds that married Japanese women associate their social status with the income and education of her husband, rather than his occupations *per se*. In particular, if the husband is in a high-income occupation, and notably in a listed company or a public institution, the wife's perception of her social status tends to be higher.

Aramaki (2018) examines women's class consciousness according to the different life stages and marital situations, using the SSM 2015 data. He finds that among the child-rearing cohort of 35 to 49 years old, women's own occupational prestige had no effect in their class consciousness. In fact, unemployed status had a positive effect on their class consciousness, presumably because it was an indication that their husbands earned enough to enable them not to work. Otherwise, among married women, the husband's education, occupational prestige, and income affected their class consciousness more than those of their own, although their own income and prestige of their first occupation had a smaller significant effect.

Using the same SSM 2015 data, Tanioka (2023) shows that university-graduated women, when considering their social status, tended to associate it more with increased household income than with their own occupational prestige. However, in this study, the household income is not delineated between her own income and that of her husband's. Therefore, given the typically lower income of wives compared to their husbands in Japan, this may imply that, even if the wife is highly educated, her perception of a high social status is still contingent on her husband's income.

While social status may not only be about income, according to the 16th National Fertility Survey and shown in Table 1.2, among unmarried respondents primarily in their 20s, 92% of females indicated that the income of their marriage partner was either important or would be considered, while only 48% of males shared this perspective (IPSS 2022). Conversely, while only 7% of females stated that his income was not a factor, the figure was higher at 50% for males. Furthermore, 81% of females deemed his occupation as important or stated it would be considered, compared to 47% of males. Lastly, the importance of education was almost evenly split for females, while 71% of males considered it unimportant. These findings highlight that

Japanese females have higher expectations for their marriage partners' SES than males have for their female partners.

Table 1.2: Views on Marriage and Partner

		Female	Male	
I. Condition for Marriage Partner				
Income	Important or will consider	92%	48%	
	Not important	7%	50%	
Education	Important or will consider	52%	27%	
	Not important	47%	71%	
Occupation	Important or will consider	81%	47%	
	Not important	18%	52%	
II. Financial comfort as main benefit of marriage		19%	8%	
III. Woman's Life Course		Ideal	Expect	Ideal Wife
Not marry and continue working		12%	33%	7%
Marry, have no children, and continue working		8%	5%	6%
Marry, have children, and continue working		34%	28%	39%
Marry, have children, stop working, and return to work		26%	23%	29%
Marry, have children, stop working and not return to work		14%	4%	7%
Other		6%	7%	13%

Source: 16th National Fertility Survey (IPSS 2022)

This pattern is also evident in a study conducted by Brinton *et al.* (2021), which analyses data from a marriage matchmaking agency in Japan obtained in 2006-2007. The findings from this study consistently reveal that women tend to seek out men with higher incomes and, at least, an equivalent level of education compared to their own. At the same time, none of the women interviewed in the study expressed a desire to become full-time housewives, with the majority indicating a preference for part-time work. Thus, while these women do not want to be completely financially dependent on their future husbands, the authors conclude that the norm of Becker (1985)'s gender-role specialisation is still applicable in Japan.

An aspect of the Status Dependency theory involves how women perceive their own prestigious occupations or high income as either an advantage or disadvantage in maximising their probability of marrying someone with existing or potential high status. In this context, Suzuki (1994) developed a Scale of Egalitarian Sex Role Attitudes in Japan, which includes an indicator stating, "It is better for women not to have an occupation with high social status or wage because it will be difficult to get married." Suzuki (1996) used this indicator herself and demonstrated that, in the 1990s, employed women in Tokyo generally disagreed strongly with this statement. However, this could be attributed to the biased sample of women employed in the 1990s in Tokyo, which was generally more progressive than rural areas. A more recent study using this indicator yielded slightly different results. A survey conducted from 2016 to 2018 by Nukita & Furuya (2021) among female students at a university in Tokyo indicates that, while the correlations are generally weak, those who were strongly family-oriented and those who were strongly work-oriented both tended to agree with this indicator. Additionally, Brinton *et al.*'s study above indicates that men were inclined to avoid women with graduate education or high income.

This phenomenon of Status Dependency could be attributed to the relatively high proportion of women who leave work to become full-time housewives after childbirth. Even if they return to

work after their children become older, they often take up low-wage part-time jobs to supplement the household budget, which may not particularly lead to notable careers (Nagase 2003, 2018; Nishimura 2014) that could form a basis for their identities. To provide some data, analysing SSM data from 1955 to 1995, Tanaka (1997) discovers that, while 55% of women in their 30s had equal or higher objective social status – measured by education, occupation, and income – compared to that of their husbands before marriage, only 25% maintained a similar objective social status after marriage. This decrease is because many of them had quit working or changed occupations. In particular, only 6% earned at least as much as their husbands. The study then finds that women whose objective social status was similar to that of their husbands before marriage were not the predominant group that disagreed the most with the gender division of roles. The crucial factor was whether the wife was still working and had a career in her own right after marriage. In other words, if the wife had a notable career, she was less likely to agree with the gender division of roles that typically entails dependence on the husband's social status.

Need for Nuancing

This leads to the point that some clarification may be necessary in applying the Social Status Dependency theory to Japanese women. In the above Tanioka study, theoretically, if university-graduated women were unmarried or contributed significantly to the household income, then her social status could be contingent entirely or partially on her own income. Aramaki's study above also discovers that, among the younger cohort and unmarried women, their own occupational prestige was effective for their class consciousness. Thus, it becomes evident that the applicability of the Social Status Dependency theory in Japan requires careful consideration of individual circumstances and life stages, raising the need for a nuanced approach to understanding women's social status dynamics.

In particular, as shown in Table 1.2, while only 12% of females expressed not marrying and continuing to work as an ideal, 33% expected this scenario to happen. This suggests that one out of three young women does not anticipate getting married, indicating a recognition that they cannot rely on a husband for income or social status. A notable point is that 39% of males anticipate an ideal wife continuing to work after having children without a break, a percentage higher than the ideal or expectation by females themselves. Additionally, only 7% expect her not to return to work after childbirth, surpassing the female's ideal life course at 14%. These data suggest a distinct preference among men for an ideal wife to continue working instead of relying solely on their income. This inclination might lead to men seeking to marry women with high income potential and occupational prestige, potentially influencing women's occupational expectations to enhance their marriage prospects.

In summary, while the Status Dependency theory may explain the relatively low occupational expectations of Japanese females broadly, a shifting dynamic requires nuanced consideration and the disaggregation of diverse groups within females. With more women opting to pursue careers post-childbirth, facilitated by evolving policies such as parental leave and reduced work hours (Nagase 2014, 2018), it becomes crucial to acknowledge differences among types of women in defining their social status. Although married women without notable careers may still tend to link their status to their husband's, indications suggest that unmarried women or those with careers and higher income are increasingly defining their social status based on their own characteristics. This is particularly plausible in the context of declining real wages and the decreasing prevalence of life-type employment practices among males.

The acknowledgment of this evolving landscape is essential in examining the occupational expectations of young females, since the way they envision their future social status may significantly shape their careers. In other words, if a girl expects her social status to be

determined predominantly by marriage and her future husband's standing, she may not be inclined to have high occupational expectations. Conversely, if she envisions defining her social status based on her own occupation and income, her occupational expectations are likely to be higher. This matter is explored more in-depth in Chapter 6 through interviews conducted with female university students in Japan and the UK.

Institutionalised Gender Division in the Japanese Labour Market

This section presents a theory explaining how Japanese labour practices remain deeply rooted in an outdated, institutionalised model of gender role division, where men are primary breadwinners and women are expected to shoulder family caregiving responsibilities. It looks closely at two key aspects: the duality in the labour market, particularly the distinction between regular and non-regular employment, and the widespread issue of excessive overtime work. These characteristics pose significant challenges for women striving to balance careers with family responsibilities. The adverse consequences often lead women to exit the workforce, resulting in a shortage of female role models capable of demonstrating a successful blend of professional achievement and parenthood, which may discourage young female students from aspiring to their desired occupations in the future (Maeda 2017).

Duality of the Labour Market

To understand this issue in more depth, it is important to consider the historical context of how the Japanese employment system has been formed. Nagase (2003), Hattori (2015) and others explain that it took shape during the rapid economic growth of the 1960s, characterised by linking corporate human resource management practices with a social security system based on family care. Essentially, this employment system entailed long-term job security and seniority-based wages, primarily benefiting male employees in large corporations. Consequently, while men enjoyed stable jobs within companies, women often found themselves in peripheral positions. This system operated under the assumption that women would exit the workforce due to marriage and childbirth, thereby being excluded from *de facto* job security and fair seniority-based wages.

In 1981, the International Labour Organisation (ILO) adopted Convention No. 156, shifting from the gender-based 'division of labour' family model to the 'sharing' family model, where both men and women assumed family responsibilities (ILO n.d.). Despite this change, Japan has continued to follow the division of labour model, which relies on the assumption that women would primarily care for the family, even as many advanced countries have made this transition. Meanwhile, the workforce in Japan has been divided into two distinct categories: regular and non-regular employees.

This division creates a notable contrast. Regular employees, who are predominantly men, enjoy the benefits of stable and lifelong employment, comprehensive benefits, annual salary increments, career growth opportunities, and better returns on educational investments. Conversely, non-regular employees, primarily women, frequently grapple with precarious work conditions, lower pay, limited social protection, fewer chances for career advancement, simplified termination processes, and diminished returns on education compared to their male counterparts (Ishikawa 1997; Houseman & Osawa 2003; Nagase 2017, 2021; Yamaguchi 2017).

Many of these women hold positions as part-time, *arbeit*, dispatched, and fixed-term contract workers. Japanese companies, with a tendency for seniority-based wage increases, often opt to hire part-time workers as a means to reduce labour costs (Houseman & Osawa 2003). As a result, women increasingly encounter challenges in securing regular employment that offer career prospects, causing them to take up non-regular positions. However, according to the analysis by Nagase (1994) using 1983 data, the term 'part-time' is more of a categorisation rather than an

indication of working fewer hours. In reality, many of them work just as many hours and, in some cases, perform the same tasks as full-time regular workers but without receiving the same wages or benefits (Nagase 2003).

After ratifying the United Nation's Convention on the Elimination of All Forms of Discrimination against Women, Japan introduced the Equal Employment Opportunity Law in 1986. This law has opened up possibilities for women to be employed in regular positions for career-tracked *sogoshoku* alongside men (See Box 1.1). However, many women still face challenges in balancing their work and family responsibilities when they get married, have children, or need to care for their families, particularly due to long work hours.

Box 1.1 Hiring Preference for Generalists in Japan

The Japanese labour market exhibits a distinctive hiring practice, especially prevalent among large corporations, where they tend to recruit graduates *en masse*, primarily upon their graduation from universities (Yamaguchi 2017). This practice often entails competitive recruitment procedures, requiring students to undergo tests and interviews while dressed in standardised suits. These bulk hiring practices typically align with the academic calendar, with offers being extended to students in their final year of university, instilling a sense of job security and stability for many prospective graduates.

One notable aspect of this this organised hiring system is that it often results in graduates being employed as generalists rather than for specific expertise or occupations. The new recruits are frequently assigned to a company's general workforce, where they undergo training and rotate through various departments, consisting of areas such as marketing, human resources management, public relations, IT, and so on. This approach aims to nurture well-rounded employees capable of adapting to diverse tasks and contributing to the company's overall success in the long run. Consequently, it provides graduates with a solid foundation and exposure to a wide range of areas, shaping them into generalists rather than specialists with a specific occupation. Hamaguchi (2016) refers to this practice as the Membership Type, in contrast to the Job Type.

As a result, this hiring practice has become a defining feature of Japan's labour market, where many students expect to secure employment as company workers or civil servants in general, rather than specific types of occupations like staff training specialists, editors, or statisticians, since recruitment for such specific positions is relatively uncommon. The exceptions to this trend are occupations that require certifications or qualifications, particularly in the field of sciences. Additionally, while these mass hirings primarily involve regular positions, there are distinctions between the managerial career track (*sogo shoku*) and the less promising clerical track (*ippan shoku*) which are largely taken up by women.

While some scholars state that it is the employers who assign women to either of these two tracks (Nagase 2021; Yamaguchi 2017), Chapter 3 shows that, based on the PISA 2018 data, a higher percentage of Japanese girls themselves expect to become General Office Clerks (*ippan shoku*) rather than Office Supervisors (*sogo shoku*), despite the greater opportunity for career development for the latter. This preference is presumably because *sogo shoku* often entails significant overtime hours that challenge WLB, as elaborated in Chapter 5. Furthermore, the girls may have expected that employers are less inclined to hire women for *sogo shoku* positions due to the anticipation that they may take extended leaves, work reduced-hours, or leave the company to care for their families.

Subsequently, with the burst of the bubble economy in 1991, a new era for the Japanese management model emerged in the 1990s, exacerbating the situation for women. To cope with the prolonged economic recession, employers began downsizing the core workforce of male regular employees and instead sought to increase peripheral and low-cost non-regular employees from outside the company. This has resulted in the proliferation of part-time workers and the expansion of categories related to outsourced dispatched workers. However, Houseman & Osawa (2003) claim that the growth in part-time employment cannot simply be attributed to the long recession, as the rapid increase began well before the economic downturn of the 1990s. They suggest that, as markets opened up due to trade liberalisation, Japanese companies began to face pressure from foreign shareholders and banks demanding short-term profitability, which, in turn, required cutting labour costs.

One of the underlying factors contributing to the duality of regular and non-regular employment is the prevailing corporate culture in Japan, which places a strong emphasis on loyalty, long-term commitment and investment. Regular employees, usually males, are often viewed as integral members of the company, while non-regular employees, usually females, are treated as expendable and transient. Employers tend to hire young job seekers for regular employment posts as generalists upon their graduation, as explained in Box 1.1. In this model, individuals are guaranteed lifetime employment and are trained, managed, and promoted according to seniority.

Therefore, firms have continued to protect their top-heavy core workforce, which often consists of older, highly paid, but less productive (male) workers. This strategy is pursued at a time when cutting costs and raising productivity are necessary in the face of heightened global competition. As a result, firms have expanded the size of non-regular workers, particularly low-wage part-time workers who are predominantly women (Houseman & Osawa 2003). Furthermore, if women leave their regular jobs for childrearing and attempt to re-enter the job market at a later date, they have very limited opportunities for regular employment (Nagase 2003, 2021; Yamaguchi 2017, 2019a).

Since the 2000s, several legal changes related to parental leave and flexible work arrangements have been introduced; however, their practical implementation remains limited (see Chapter 5). Consequently, the gender-based division of family responsibilities has shown minimal evolution. This is evident in the low utilisation of parental leave by males and their marginal involvement in household chores. The persistence can be attributed to the close linkage between the corporate employment management system and the family-oriented tax and social security system in Japan.

Under this system, the primary worker – usually husbands – pay taxes and social insurance contributions based on a division within the family unit that provides a financial safety net for spouses – usually wives – with limited or no income. Specifically, wives who are financially dependent are exempt from income tax, health care contributions, and pension premiums if their income remains below certain thresholds – yet they are eligible for the latter two benefits. Therefore, many women opt for part-time work with incomes that fall below the non-taxable and non-insurance premium thresholds, while simultaneously fulfilling caregiving roles within the family (Houseman & Osawa 2003; Nagase 2003, 2023a, 2023b), as shown in the Employment Status Survey 2022 (MIC 2023b).

From the employer's perspective, hiring these women is advantageous as it reduces labour costs, given the companies' generation exemption from paying their social insurance premiums. However, Nagase (2003, 2011, 2023a, 2023b) advocates limiting exemptions for pension premiums as they disincentivise women's employment. In addition, from an equity perspective, exemptions diminish the pension benefits of the full-time working population without dependents. Furthermore, this treatment of female employees as dependents also reinforces the

expectation by employers that their male employees will work long hours, assuming that their wives are handling family responsibilities, which further hinders women's career development.

As for recent statistics, the Labor Force Survey of July 2023 reveals that women comprise only 35% of regular employees, yet they account for 67% of non-regular employees (MIC 2023a). Additionally, from a different perspective, non-regular employment make up 53% of women's employment, which significantly contrasts with the 23% observed among men. Importantly, it should be highlighted that, although part-time workers are generally not categorised as regular employees, a substantial proportion work full time (Houseman & Osawa 2003; Nagase 2003).

In light of these circumstances, Ochiai (2015) criticises that Japan has missed its opportunity to modernise its social welfare system when it was enjoying a short-lived period of prosperity during the economic bubble of the 1980s. Instead, it has been reinforcing the family-oriented system of the 20th century, which continues to complicate reform efforts, resulting in what is known as the 'lost two decades.' Hattori also concludes that addressing these issues requires changes in the dependent provisions related to taxation and social security, improved regulations to limit excessive working hours, and stronger oversight of workplace practices, including enhancing penalties for labour standard violations.

Thus, the duality of the labour market in Japan perpetuates traditional gender roles and societal expectations regarding women as caregivers for the family and supplementary workers. This duality also has a significant impact on women who are university-educated. According to Nagase (2018), in 2015, approximately 70% of university-educated females aged 25-39 years old who had never been married (typically without children) held permanent regular contracts. However, only around 40% of university-educated working mothers with a child aged 0-3 were regular employees. In this context, the study highlights that, after controlling for factors such as educational attainment, tenure, and occupation, the wage gap between regular and non-regular employees remained significant in Japan compared to other countries.

Excessive Overtime Work

In addition to the duality of the Japanese labour market, a defined characteristic is the practice of excessive overtime hours for regular employees, primarily male, in exchange for lifetime job security. This model has historically operated on the assumption that male workers have housewives at home who would take care of the family. Yamaguchi (2017) points out that this system might have been rational during the period of post-war high economic growth, but the model is now outdated as more educated women enter the labour market. Nagase (2022) also criticises the standard labour practice as inhumane, where employers have unlimited control over job assignments, workplace locations, and working hours. What is even more aberrant is that regular workers claim this as the norm and do not perceive it as unusual.

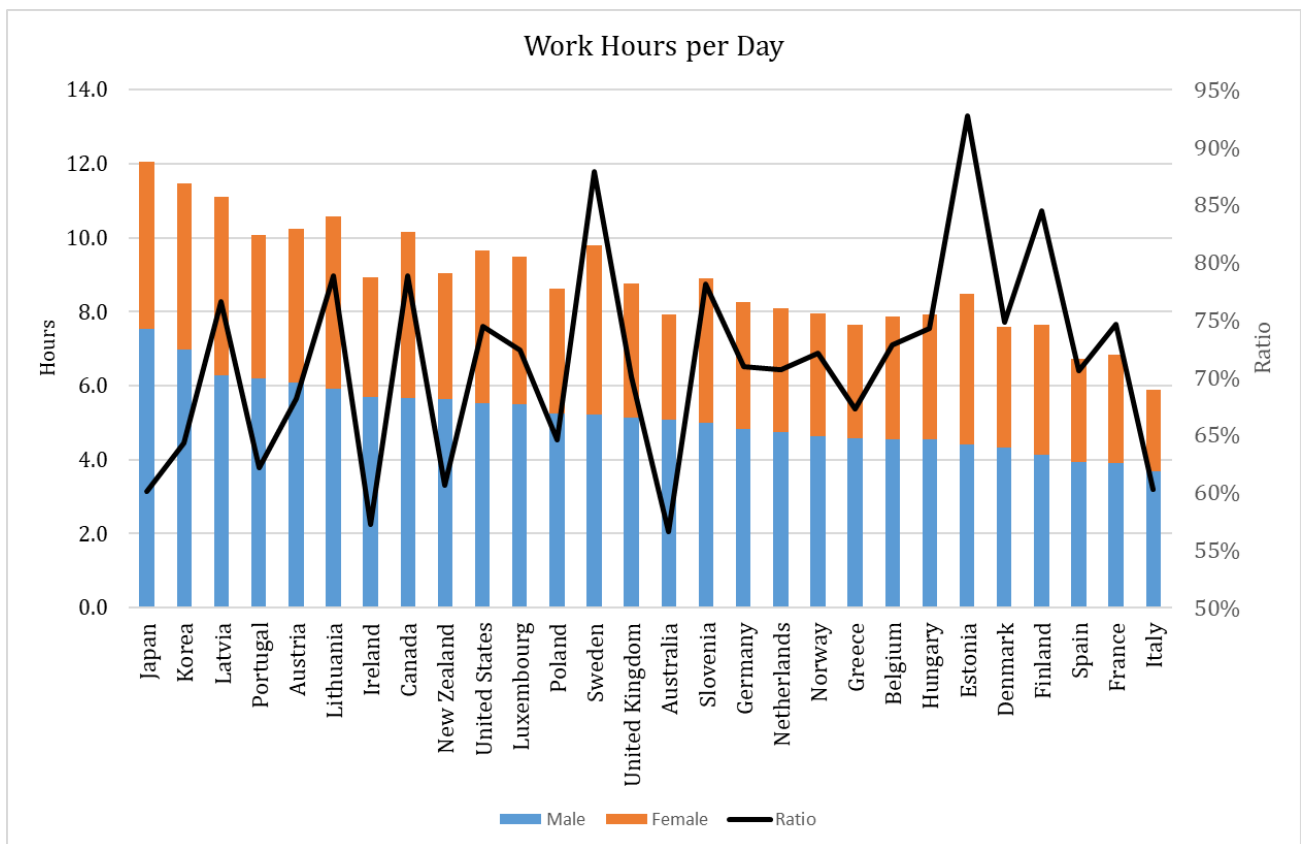
Female regular employees are also expected to work excessive overtime, which poses significant challenges when they have young children, unless they work for progressive major corporations or the public service, have grandparents to help, or pay high fees for babysitters or day care (Hattori 2015). Balancing long hours at the workplace with family responsibilities is often incompatible. Since many of their husbands are themselves engaged in the same work culture, it creates a double burden for women who are still expected to be the main carer of the family (Hochschild & Machung 2012).

In this context, Takeishi (2011) discovers that the utilisation of parental leave, reduced work hours, flexitime, and telework is quite low. Even among those who use these systems, they often do not find them flexible enough. Moreover, the eligibility to access such systems is limited, typically reserved for specific cases like caring for infants or the elderly (see Chapter 5). This is a

significant factor driving many women in Japan to exit the workforce to raise children. As their children grow older, numerous women re-enter the workforce, often opting for part-time employment to supplement family income while continuing to fulfil their primary caregiving roles (Hattori 2015).

This distinct pattern of the male breadwinner and female caregiver model is evident in international statistics. According to the OECD, Japanese men, on average, spend the longest hours in paid work among developed countries, at 7 hours and 32 minutes per day. This figure is more than double the work hours of Italian men at 3 hours and 41 minutes, and 2 hours and 21 minutes longer than that of British men at 5 hours and 9 minutes (refer to Figure 1.1) (OECD.Stat n.d.).

Figure 1.1 Average Work Hours per Day by Gender and Gender Ratio



Source: OECD.Stat, latest year, and author’s calculations

Japanese women also rank fourth in terms of paid work hours, dedicating 4 hours and 32 minutes on average, following Latvian, Lithuanian, and Swedish women. They work 56 minutes longer than British women, who put in 3 hours and 36 minutes. However, when it comes to the gender ratio in paid work, Japanese women work only 60% of the hours worked by Japanese men, placing Japan at the third lowest rank among developed countries, after Australian and Irish women. In contrast, Estonian women’s paid work hours is equivalent to 93% of that of Estonian men, differing by only 19 minutes. Women from other Former Socialist countries like Latvia, Lithuania, and Slovenia, as well as Nordic countries such as Sweden and Finland, tend to work as many hours as men in their respective countries.

Regarding excessive weekly working hours, on average, 8.9% of Japanese men aged 15-64 worked more than 60 hours per week in 2022, making Japan the second highest among developed countries, trailing only Greece at 9.4%. In the case of Japanese women, this percentage stand at

2.2%, ranking fifth highest after Korea, Chile, New Zealand, and Greece. These data highlight the prevalence of overtime work in Japan for both males and females, but they also reveal significant gender disparities, even when compared on an international scale. It is noteworthy that Japan has not ratified the ILO Convention, which sets a standard workweek of less than 48 hours.

On the flip side of Japanese men's excessive work hours is their limited time allocated to household chores. Figure 4.3 in Chapter 4 shows that Japanese men devote the least amount of time to household chores among men in OECD countries. Again, this trend can be attributed to entrenched norms on gender roles, which are reinforced by employers who often require men to work long hours, presuming that their wives manage family responsibilities (Nagase & Brinton 2017).

Even when women work long hours similar to men, Yamaguchi (2017) asserts that they face disadvantages in terms of promotion to management positions, which can have demotivating effects. He argues that many women leave their jobs not mainly due to family reasons but also because of demotivation, citing Osawa (2015) to support his claim. However, the 11th Longitudinal Survey of Adults in the 21st Century presents a different picture. It reveals that among married women who have left their jobs in recent years, 65% of the reasons (with multiple reasons allowed) are related to family issues, such as marriage or childbirth, caregiving responsibilities, accompanying relocated family members, or facing difficulties in taking parental leave. Conversely, only 3% of these reasons are related to potential discrimination, such as finding work uninteresting, experiencing unfair assessments of their abilities or achievements, or becoming frustrated with company management (MHLW 2022a). Therefore, it appears that both demand-side and supply-side factors contribute to the reasons for women to leave their jobs.

Nonetheless, the re-entry of women into the labour force after a gap can be challenging. As mentioned earlier, companies in Japan typically prefer hiring freshly graduated students for regular positions, making it difficult for women to regain access to these stable, career-oriented roles, as they are so scarce. Consequently, many women are left with little choice but to accept part-time, low-paying jobs with minimal career prospects, perpetuating gender disparities and limiting their career advancement opportunities.

This unique aspect of the Japanese labour market highlights the complex interplay between traditional employment practices, family dynamics, and gender roles, all of which have significant implications for women's participation in the workforce and the occupational expectations of young females. The government acknowledges that the combination of long working hours, workplace environments, and ingrained gender role stereotypes are the primary issues obstructing the advancement of women in the workforce. As the consequence permeate society as a whole, it sees the need for workstyle reforms that enhance productivity per hour and the overall competitiveness of organisations (MHLW n.d.b). In this context, when considering the need for workstyle reform, it is crucial to evaluate Japanese organisations' readiness to adopt a discretionary working style based on results-based management, granting employees greater autonomy in managing their work hours.

In this respect, according to a study conducted by Sato (2001) in 1999-2000, among white-collar employees engaged in planning, research, or analysis – which offered the potential for discretionary work – less than 9% indicated that they had the authority to determine work priorities and office hours. This low percentage is attributed to the frequent assignment of unforeseen tasks, tight deadlines, and heavy workloads requiring overtime and weekend office work. Furthermore, only 5% of employees with the potential for discretionary work believed that the existing management style was conducive to such an approach. The reasons cited included the absence of clear task responsibilities (71%), well-defined task objectives (62%), an

evaluation system based on achievements (50%), and decentralised decision-making for tasks (39%).

In essence, working conditions in Japan do not support the effective implementation of a discretionary working style aimed at reducing excessive overtime in the office. It is also worth noting that, in this survey, only 11% of potential users of discretionary work were women. Since the survey was conducted over 20 years ago, it remains to be seen whether Japanese corporate management practices have evolved to embrace enhanced discretionary work. Such a shift would require a more outcome-oriented mindset as a basis to enable flexible work arrangements and to curb excessive overtime.

The shift towards more outcome-oriented management is particularly relevant in light of Higuchi (2010)'s examination of the economic rationale to regulate excessive working hours. On the one hand, government intervention has the potential to disrupt profit margins and operational efficiency, leading to distortions in labour allocation, which could yield unfavourable outcomes for economic efficiency. However, he states that government intervention is justified when prolonged work hours jeopardise workers' well-being, workers possess limited bargaining power relative to employers, or when the labour market lacks fluidity. Additionally, Higuchi contends that intervention is warranted in cases where negative externalities affect other workers, particularly those with family responsibilities, in an era where retaining a stable workforce is imperative. At the same time, he emphasises that, beyond mere work hour regulations or increasing the legal overtime premium rate, the government must embrace a more comprehensive strategy that includes enhancing labour market flexibility, expanding employment opportunities, and, most critically, boosting overall economic productivity.

Testing the Theories

The preceding section elaborated on the three theories used in this research that could potentially explain why Japanese young females have relatively low occupational expectations compared to those of males as well as female counterparts in other developed countries. Table 1.3 summarises the questions addressed in the following chapters that relate to these theories.

To recap, Gottfredson's theory on Circumscription and Compromise, which discusses how the youths limit their occupational choices based on gender and social class, could explain how young girls are influenced by parents who encourage them to pursue female-oriented occupations that are more conducive to taking care of the family, often with relatively low SES. The theory could also explain how the absence of mothers with professional occupations is hindering the generation of a critical mass of role models for young females to follow similar paths (Maeda 2017).

Specifically, Gottfredson's theory is applied in Chapters 3 to examine correlations between lower occupational expectations among Japanese females and choice of female-dominated occupations, educational expectations, academic competence, and social class. Furthermore, Chapter 6 utilises the theory to investigate potential differences in how female university students in Japan and the UK circumscribe and compromise their occupational expectations based on social class, parental encouragement, availability of role models, and prospects for WLB.

The second theory on the Social Status Dependency Model, where a woman relies on the social status of her husband, generally prevailing in Japan today, could explain that young women have more incentive to focus on marrying well rather than striving for self-reliance in selecting and pursuing a challenging occupation. However, studies show that unmarried women or those with high income attribute their own occupational prestige more in determining their social status. Therefore, the application of this theory may need to be nuanced when examining educated

Japanese females, particularly considering the probability of finding a partner with the requisite high income, education, and prestigious occupation is no longer high.

Table 1.3: Questions Addressed in Chapters that Relate to the Theories

Chapter	Circumscription and Compromise	Status Dependency	Gender Division in the Labour Market
3	How does the theory explain the relatively low occupational expectations of Japanese girls when considering their choice of occupations, educational expectations, academic aptitude, and social class?		How does the theory explain the choice of expected occupations by girls and boys, specifically in terms of female or male-dominated occupations?
4			How does the theory clarify the correlation observed between the lower occupational expectations of girls relative to boys within the same country and elevated levels of economic reliance of women on men, as reflected in gender equality indicators assessing gender role divisions in both the labor market and household?
6	How does the theory explain any differences between female university students in Japan and the UK in terms of their occupational choices and related factors such as social class, gender-based parental encouragement, availability of role models, societal gender norms, and work conditions for women?	How does the theory elucidate the variations between female interviewees in Japan and the UK concerning their perception of whether their future status is shaped by their own occupations or the status of their prospective husbands? To what extent do parents of the interviewees perceive the future social status of their daughters?	How do the interviewees perceive the characteristics of the labor market in Japan, UK, or Europe, and to what extent do these perceptions influence their occupational expectations?

This theory is mostly examined in Chapter 6 to investigate the extent to which female interviewees in Japan and the UK consider their future status to be determined by their own occupations or the status of their prospective partners. Additionally, it will be used as a yardstick to assess how the parents of the interviewees perceive the future occupations of their daughters in the context of their future social status.

The theory of institutionalised gender division in the Japanese labour market, characterised by the duality between regular and non-regular employment and excessive overtime work, could explain the lower occupational expectations of Japanese females, as these factors disincentivise women from pursuing a career. The division is rooted in historical employment practices that disadvantage women, with non-regular positions offering lower pay and limited career prospects. Additionally, the prevalence of excessive overtime for regular employees, grounded in an outdated model of a traditional family structure, disproportionately affects women, hindering their ability to balance work and family responsibilities, including by diminishing the household contributions by their husbands.

The theory is applied in Chapter 3 to investigate whether this division is reflected in the choice of expected occupations by girls and boys, notably female or male-dominated occupations. It is also explored in Chapter 4, wherein relevant gender equality indicators, representing the theory in the labour market and the household sphere, will be utilised to assess their correlation with occupational expectations across developed countries. Furthermore, in Chapter 6, the theory is verified by seeking the perceptions of female university students regarding the Japanese labour

market, particularly in terms of their ability to maintain WLB, and comparing these perceptions with those of students in the UK.

Analytical Framework

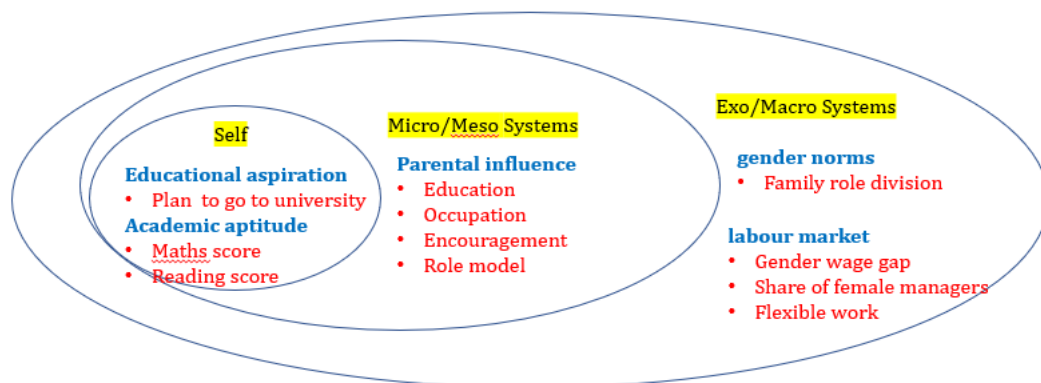
So far, the above has provided the definition of occupational expectations, a literature review on occupational choices and theories regarding why Japanese females have relatively low occupational expectations. Based on these elaborations, the following section first presents a general framework to categorise the factors influencing the occupational expectations of females and males. Second, it lists the relevant variables for use in the quantitative analyses of Chapters 4 and 5, as well as issues to probe in the qualitative analysis of Chapter 6.

Explanation of Bronfenbrenner’s Ecological Systems Theory

Developmental career theories elaborate on the various levels of the environment that influence occupational decisions (Bandura *et al.* 2001; Farmer 1997; Nakayama 1985). For instance, Bronfenbrenner’s Ecological Systems theory (1979) classifies the factors that potentially shape young people’s occupational expectations. This conceptual framework claims that an individual’s human development is influenced by interactions in the microsystem (e.g., family, peers, teachers), mesosystem (e.g., parents’ social class, school), exosystem (e.g., economic and political systems), and macrosystem (e.g., society’s cultural values).

Applying the framework to this study implies that occupational expectations can be shaped by the following factors within each category, explained below and illustrated in Figure 1.2.

Figure 1.2: Bronfenbrenner’s Ecological Systems



Source: Author, based on Bronfenbrenner (1979)

- Individual characteristics:** While individuals develop through interactions within the ecological systems, particularly influenced by their socio-economic background, children from the same family can have different occupational expectations. Therefore, individual characteristics, such as gender, academic competence, interests and educational aspirations must be examined as integral components that shape occupational expectations.
- The **micro system** consists of parents, peers, or teachers, while the **meso system** involves the interaction of these elements within social class, communities and schools. For simplicity, these two systems are combined in this study. Furthermore, although peer influence, teachers’ encouragement for further education, and the school environment can potentially impact occupational expectations, this study generally sets aside these topics, primarily due to lack of quantitative data. Instead, it predominantly focuses on the influences of parents, as they are regarded as key in shaping occupational expectations of youths. In particular, this research scrutinises parents’ educational levels and occupations, as well as their roles in providing encouragement and serving as role models.

- The **Exo-system** consists of policies, measures, or situations regarding women's participation in the labour market, practices related to gender equality in the workplace, or WLB policies that can either facilitate or impede mothers' ability to work. Typical indicators include the gender wage gap and representation of female managers. The **macro-system** includes prevailing norms regarding gender roles, which can influence women's decision regarding work and family responsibilities. These norms can be gauged using indicators like the gender division of household chores and attitudes toward working women. In this study, since the exosystem and macrosystem are interconnected, they are combined and referred to as the '**gender equality landscape**' in Chapter 4.

Studies Applying Bronfenbrenner's Theory

In the application of Bronfenbrenner's theory to women's occupational expectations, studies investigate micro, meso, exo, and macro systems, with a particular focus on the family, school, culture, and social capital. For instance, Schoon (2015) incorporates Bronfenbrenner's perspective to elucidate the underrepresentation of women in science occupations. She asserts that early experiences within the family and school settings play a significant role in shaping self-concepts, choices, and behaviours. These, in turn, become integral components of the gendered social landscape, interlinked with opportunity structures, social obstacles, and gender-based segregation within the labour market. In essence, even minor biasing effects can accrue over time, leading to behavioural trajectories that restrict the opportunities of females with capabilities and social backgrounds similar to males.

Furthermore, the study highlights that anticipated gender disparities in future career prospects can significantly impact career decisions, especially when young women become aware of gender inequalities related to family responsibilities. It underscores the importance of adopting a comprehensive perspective that considers a multitude of influences spanning from the micro-level to the macro-level. This holistic approach is essential for understanding how various factors interplay and evolve over time, shaping the occupational plans of females. The concept aligns with Gottfredson's theory on Circumscription and Compromise, as explained earlier.

Menon (2017) refers to Bronfenbrenner's Ecological Systems theory in analysing career choices, which includes multiple levels of environmental influence within various systems. However, it employs a similar yet distinct model to understand the family-school relationship, with a primary focus on the family. This model comprises six levels of influence, encompassing a child's academic achievement, personal characteristics (including gender), parent-child interactions, family atmosphere, parental characteristics, and the socio-economic status of the family. The study explains that parental influences, including differential treatment of daughters and sons, mediates the effects of distal causes such as socio-economic status or cultural context on academic achievements and career choices.

A study by Meece *et al.* (2014) employs Bronfenbrenner's theory in investigating gender differences in the occupational aspirations of rural adolescents in the USA, focusing on individual, familial, schooling, and community factors. The research uncovers evidence of girls holding high occupational aspirations in fields that are traditionally less represented by females. It highlights the significance of contextual variables in predicting gender-related aspirations among these rural youth, such as individual motivation, parental expectations, and family income.

In Japan, there are fewer studies that use Bronfenbrenner's Ecological Systems theory in analysing the process of occupational choice-making of females. This is presumably due to the shortage of research that focuses on occupational choices from the outset, as explained earlier. Nevertheless, a few use the framework to describe a comprehensive approach in understanding or addressing personal development issues. For example, Bartlett (2018) employs

Bronfenbrenner's theory to describe the reasons behind Japanese high school students' lack of motivation and engagement in learning English. He highlights how the social norms in Japanese education emphasises teachers as knowledge holders and students as passive learners of grammar. He also discusses the cultural inclination to conform and avoid standing out. Bartlett argues that the reluctance of Japanese students to engage in foreign language communication is influenced by sociocultural factors beyond just language abilities.

On the other hand, Aoki *et al.* (2019) present two case studies as examples of practical application of Bronfenbrenner's Ecological Systems approach, which posit that personality development is a dynamic process shaped by external influences from both society and the environment. It argues the importance of personal growth where 'person-environment fit' is central. Achieving this alignment with the environment entails sharing information with stakeholders, pooling resources, defining shared objectives, and allocating different roles.

Specifically, the study explains that in one case, new high school teachers improved their ability to advise students on university and career choices by conducting mock interviews and seeking guidance from colleagues with expertise in relevant subject areas. Another case involved a university student's recovery from depression through frequent discussions with various academic and administrative staff, including a university psychiatrist, fostering an environment for open dialogue on personal issues. These approaches align with Bronfenbrenner's argument against viewing children as isolated entities, underscoring the significance of attentiveness to their surrounding social contexts.

In sum, the studies discussed above employ Bronfenbrenner's Ecological Systems theory to investigate a range of influences on individual development, spanning from micro to macro levels, encompassing the family, school, culture, and social capital. They underscore how factors like motivation, parental expectations, and family income within these ecological systems impact future plans, ultimately shaping gendered career trajectories, including both the underrepresentation of women in science careers and aspirations for non-traditional occupations. Additionally, some studies emphasise the importance of comprehensively addressing personal development by considering sociocultural factors affecting educational performance and advocating for environmental alignment through information sharing, resource pooling, shared objective definition, and role allocation.

Summary of Key Factors

Based on the literature review and theories discussed earlier, Table 1.4 summarises the key factors to be examined in exploring why Japanese girls have low occupational expectations. These factors encompass variables in the quantitative studies of Chapters 3 and 4, as well as the focal issues in the qualitative study of Chapter 6. While some referenced studies may have primarily addressed achieved occupations, targeted males rather than females, or involved broad occupational categories or employment status, they nonetheless include factors that are well-established in the literature of future career choices. Furthermore, while specific indicators or topics chosen in this research may not exactly match those in the reference studies, they are nevertheless similar and better suited to explaining the effects on occupational expectations. These factors are categorised according to the analytical framework of Bronfenbrenner's Ecological Systems Theory and are explored to verify whether the theories apply to the quest.

To provide a brief overview, micro/meso-level factors encompass self-related elements drawn from various references, such as choice of gendered occupations (Sikora & Pokropek 2011; Vondracek *et al.* 1999; Isa 2022; Yoshihara 1995; Sakata 2014), educational aspirations (Sewell *et al.* 1970; Schoon & Parsons 2002; Saha 1982; Kariya 1986; Katase 2005), and academic competence (Sewell *et al.* 1970; Schoon & Parsons 2002; Marini & Fan 1997; Kariya 1986;

Hirasawa 2011). and preferences for partners. Additionally, the theory of Social Status Dependency is tested, specifically pertaining to preferences for future partners (Blakemore *et al.* 2005; Brinton *et al.* 2021; Yamato 2008; Aramaki 2018).

Table 1.4: Key factors to be Examined

Ecological System	Subject	Factor	Example Reference	Variable/ Issue	Chapter	Theory	
Micro/ Meso	Self	Gendered occupations	Sikora & Pokropek (2011), Vondracek <i>et al.</i> (1999), Isa (2022), Yoshihara (1995), Sakata (2014)	Choice of gendered occupations	3,6	CC, SD	
		Educational aspiration	Sewell <i>et al.</i> (1970), Schoon & Parsons (2002), Saha (1982), Kariya (1986), Katase (2005)	Plan to go to university	3,4	CC	
		Academic competence	Sewell <i>et al.</i> (1970), Schoon & Parsons (2002), Marini & Fan (1997), Kariya (1986), Hirasawa (2011)	Maths and reading scores			
		Partner preference	Blakemore <i>et al.</i> (2005), Brinton <i>et al.</i> (2021), Yamato (2008), Aramaki (2018)	Importance of his education, occupation and/or income	6	SD	
	Parents (social class)	Education	Blau & Duncan (1967), Sewell <i>et al.</i> (1970), Marini & Fan (1997), Nakao (2011), Motohama (2014)	University graduate or not	3,6	CC	
		Occupation	Blau & Duncan (1967), Sewell <i>et al.</i> (1970), Schoon & Parsons (2002), Ogawa & Tanaka (1980), Genji (2004), Katase (2005)	ISEI scores		CC	
		Encouragement	Martin <i>et al.</i> (2014), Wang <i>et al.</i> (2017), Qi <i>et al.</i> (2023), Kanai (2007), Matsuda & Maeda (2008)	Encouragement of gender differentiated occupations	6	CC, SD	
		Role model	Ridgeway (1978), Baird (2008), Polavieja & Platt (2014), Matsumoto (2008)	Mother as an occupational role model		CC	
	Exo/Macro	Labour conditions	Workplace barriers/ support	Sikora and Saha (2009), Baird (2008), Power (1975), Watts <i>et al.</i> (2015), Nozaki (2010)	Gender wage gap	4	GD
					Share of female managers		
Working environment for women					6		
Parental leave and flexible work							
Social norms		Family role division	Ridgeway (1978), Baird (2008), Croft <i>et al.</i> (2014), Hook (2006), Watts <i>et al.</i> (2015), Yokota & Shigekawa (2023)	Men's unpaid work time	4,6	CC	
	Views on housewives			GD			

Note: CC = Circumscription and Compromise, SD = Social Status Dependency, GD= institutionalised gender division in the Japanese labour market

Data on educational aspirations (planning to go to university or not) and academic competence (maths and reading scores), utilised in Chapters 3 and 4, are sourced from the PISA dataset. The investigation into the issue of Social Status Dependency, aiming to assess its potential role in reducing female occupational expectations, is conducted through interviews presented in Chapter 6.

Parental factors, representing social class, include the education (Blau & Duncan 1967; Sewell *et al.* 1970; Marini & Fan 1997; Nakao 2011; Motohama 2014) and occupation of parents (Blau & Duncan 1967; Sewell *et al.* 1970; Schoon & Parsons 2002; Ogawa & Tanaka 1980; Genji 2004; Katase 2005); gender-differentiated encouragement by the parents (Martin *et al.* 2014; Wang *et al.* 2017; Qi *et al.* 2023), Kanai 2007; Matsuda & Maeda 2008), and the mother's role as an occupational role model (Ridgeway 1978; Baird 2008; Polavieja & Platt 2014; Matsumoto 2008). Data on parental education (have a bachelor's degree or not) and occupation (International Socio-Economic Index [ISEI] scores), used in Chapters 3 and 4, are sourced from the PISA dataset.

Encouragement is assessed based on whether parents advise the interviewees to pursue traditionally female-dominated occupations or prestigious roles that are typically dominated by males. The inquiry into mothers serving as occupational role models is specifically focused on whether their professions inspired their daughters to pursue similar paths. This qualitative

exploration involves direct questioning of the interviewees in Chapter 6. The discussion intentionally sets aside the question of whether the mother is considered a role model simply due to having a career or successfully balancing work and family life. Instead, it concentrates on understanding the influence of the mother's specific occupational type on the career choices of the interviewees.

Transitioning to the exo/macro level, this study probes into labour conditions, specifically assessing workplace barriers or support (Sikora & Saha 2009; Baird 2008; Power 1975; Watts *et al.* 2015; Nozaki 2010). Key indicators of the gender wage gap and the proportion of female managers, commonly used to gauge women's empowerment in the labour market, are derived from OECD data. Their implications for gender differences in occupational expectations are discussed in Chapter 4. The perspectives regarding working conditions for women, focusing on prospects for parental leave and flexible work arrangements that facilitate balancing work and childcare responsibilities, are obtained through the interviews.

The impact of social norms is explored through the practice of family role division, assessing men's unpaid work time and views toward housewives (Ridgeway 1978; Baird 2008; Croft *et al.* 2014; Hook 2006; Watts *et al.* 2015; Yokota & Shigekawa 2023) in Chapter 4. This analysis employs OECD data and international social surveys. Additionally, Chapter 6 explores how preferences and prospects for the division of household chores with their future partners influence their occupational choices, although this aspect is not extensively discussed in this thesis.

In summary, drawing from the literature review and theories, the outlined factors above will be investigated to determine their impact on reducing the occupational expectations of Japanese girls compared to their male counterparts and girls in other developed countries. This exploration encompasses both micro/meso and exo/macro systems. By employing a combination of quantitative analysis using OECD data and qualitative insights obtained from interviews, the research endeavours to test the theories and generate fresh insights for the academic literature, as further detailed below.

New Contribution to the Academic Literature

This section explains the unique contributions of this research to the academic literature on the low occupational expectations of Japanese females. The added value is derived from the utilisation of nationally representative data, standardised metrics across 36 developed countries, and in-depth interviews, offering a visual contrast between female students studying in Japan and their counterparts in another developed country. The findings reveal the anomaly of the comparatively low occupational expectations among Japanese female students, despite their internationally demonstrated competence. Moreover, the study explores the multifaceted factors contributing to this phenomenon, encompassing gender-based parental encouragement, a scarcity of role models, and concerns related to WLB.

Specifically, this study addresses a significant research gap by utilising nationally representative PISA data on the occupational expectations of high school students in Japan and other countries, departing from the usual focus on specific schools or limited geographical areas. While nationally representative samples exist, such as those in SSM studies, these datasets typically do not encompass individuals under 20 years of age, such as high school students. Furthermore, they often do not include inquiries into the future occupations expected by respondents.

In addition, the PISA data can link occupational expectations not only with the typical information about educational expectations, parental education, and occupation, but also with standardised measures of academic competency that is consistent globally, namely the PISA reading and maths

scores. Most other studies try to estimate academic competency by using self-reported Grade Point Averages or school ranking measures, which may be inaccurate, incomparable, or variable.

Another distinctive aspect is the in-depth examination of occupations, diverging from the prevalent practice in Japan that often relies on broad occupational categories, contractual types, or career plans like continuing to work after childbirth. Although the notion of occupation is broader in Japan compared to other countries because of labour market characteristics, the study still enables the assignment of some broad categories of occupations to SES, thereby enabling precise measurement of gender differences.

One of the significant contributions of this study is its capacity to employ standardised metrics for cross-country comparisons among representative high school students from 36 developed countries. Many comparative studies in occupational expectations that centre on Japan typically include only a few countries, frequently adjusting to local contexts, sacrificing uniformity. The present thesis, utilising homogeneous data, unveils the anomaly in Japan, where girls demonstrate significantly lower occupational expectations than boys, a phenomenon not observed in other developed nations. This anomaly can also be examined against exo/macro environmental factors that relate to gender norms in labour as well as in the family by using, again, uniform indicators for most developed countries regarding wage gaps, female managers, unpaid work time, and views on housewives.

Aside from the quantitative analyses using the PISA data, this research includes an in-depth comparative qualitative study between female university students in Japan and the UK. While the interviewees may not necessarily be representative of the average female university students in either country, it nevertheless shows the types of contrasts between the two countries in the factors that can shape occupational expectations of young females. Only a handful of in-depth case studies that compare Japanese females with counterparts of other developed countries based on real-voice accounts are currently available.

Furthermore, as a background to the interviews of the female university students in Japan and the UK, flexible work measures and their use in the respective countries are compared. The results clearly show how Japan lags in terms of facilitating a WLB for both women and men in pursuing a career and maintaining a family life. The focused comparison, as one example of WLB policies, adds a unique dimension to the research, offering insights into the challenging working conditions, which could affect the occupational expectations of young women—a perspective not extensively explored in existing literature."

In terms of results, some findings have contributed to new knowledge. The revelation that Japan is an anomaly among developed countries, where the average occupational expectations of girls is significantly lower than boys, is noteworthy. However, the analysis showing that girls who plan to go to university or have similar maths competency as counterpart boys have the same levels of occupational expectations is encouraging. In other words, if more girls plan to go to university, as the trend suggests, and if math scores improve against boys, the gender difference in occupational expectations could reduce.

While it is known that Japanese girls excel in maths and science on PISA tests compared to both girls and boys of other developed countries, their persistently low occupational expectations reveal a sobering reality—the country is extensively underutilising this competence. Additionally, the statistics indicating a relatively high proportion of girls planning to become housewives, even among those intending to attend university, stand out as unique in developed countries, posing a counterproductive challenge in terms of potential human capital loss.

The series of data showing that Japan is one of the most conservative among developed countries in terms of gender roles in the labour market and family role is well-established. However, showing the relationship between this landscape and the low occupational expectations of girls relative to boys paints an accentuated and urgent narrative that calls for fundamental changes in labour and improvements in family life for both women and men. In particular, the data of other developed countries serves as a compelling illustration that closing the gender gap is highly possible, although simultaneously showing that Japan has a significant distance to cover.

The interview findings also illuminate how Japanese parents continue to encourage their daughters' and sons' future occupations differently compared to some other developed countries. Additionally, the study sheds light on the proactive initiatives undertaken by schools and society in the UK to foster female participation in STEM fields, a phenomenon unperceived in Japan despite governmental policies (CAO n.d.a). These contrasting revelations stand as a noteworthy gaps in the existing literature.

Furthermore, the study highlights a significant dissimilarity in the availability of female professional role models between the UK and Japan. Witness accounts illustrate how the presence of role models significantly boosts the confidence of students in other developed countries when considering challenging occupations. Conversely, the scarcity of visible role models in Japan, as revealed by witness accounts, contributes to a lack of confidence among female students, offering a more vivid understanding than prevailing assumptions in existing literature. Finally, the study captures the divergence in student concerns, with strong apprehensions over WLB prevailing among Japanese female students, while their counterparts in the UK exhibit a comparatively diminished focus on this issue. These nuanced contrasts, derived from authentic voices, constitute a valuable contribution to the academic literature.

At the same time, the study uncovered the need for some disaggregation in interpreting the low occupational expectations of Japanese females. As mentioned above, if girls had comparable proportions planning to go to university or had similar maths scores as boys, they would have corresponding ISEI scores for their expected occupations. The interviews with career-minded female university students also revealed that a majority were not inclined towards mid-to-low level female-dominated occupations, nor were they intending to depend on their future partners for their income or social status.

Furthermore, the quantitative analysis also revealed that, while social class does have an effect on the occupational expectations of girls and boys, it does not have any significant effect on the gender difference. In other words, boys from the higher social class will not necessarily aim for higher occupations than girls from a similar class. This may indicate that these girls are more inclined to achieve their social status through their own occupations as opposed to through marriage based on assortative mating. Lastly, some interviewees were optimistic about changes in corporate practices where hiring females and leave policies are being promoted.

In summary, this research significantly advances the understanding of low occupational expectations among Japanese females in the academic literature. Utilising nationally representative PISA data, the study departs from traditional localised focuses, providing a multi-dimensional analysis of high school students' occupational expectations. By incorporating standard metrics and conducting an in-depth examination of occupations, the research adds precision and nuance to the assessment of gender differences. Cross-country comparisons across 36 developed nations reveal Japan as an anomaly, where girls exhibit markedly lower occupational expectations than boys. Qualitative insights from interviews with female university

students in Japan and the UK, alongside a comparison of flexible work measures, enrich the narrative.

The study also revealed the need for nuancing, as the occupational expectations of girls with similar university plans or math scores as boys are at comparable levels. Furthermore, social class does not significantly contribute to the observed gender difference, suggesting that girls from higher social classes may be inclined to achieve social status through their own occupations rather than through marriage. Nevertheless, fundamental changes in labour practices and improvements in WLB are urgently called for to better harness the capabilities of women to contribute to the economy. Overall, this research provides a multifaceted contribution to the literature, exploring diverse factors influencing the occupational expectations of Japanese females, in comparison with counterparts in developed countries, and uncovering variations within the cohort.

Chapter 2: Descriptions of the International Data

This chapter introduces several international data sets that are relevant to this research. They consist of PISA 2018, occupational classifications, socio-economic status, as well gender equality indicators related to labour and family life, mainly used in Chapters 3 and 4. Table 2.1 summarises these sets of data.

Table 2.1: Data and Information for the Chapters

Chapter	Topic	Data	Sample	Method	Dependent Variable or objective	Independent Variable or contributing factors
3	International comparison of gender differences in occupational expectations (micro data)	PISA 2018 (OECD, sample size 165,000 for OECD countries, of which Japan is 3,541)	Nationally representative high school girls and boys in 36 OECD countries	OLS and Blinder-Oaxaca Decomposition	ISEI score; and gender difference in average ISEI scores for each country	Educational expectation, PISA scores; and education and ISEI scores of parents
4	International comparison of gender differences in occupational expectations (micro and macro data)	Same as above	Same as above	OLS	Same as above	Gender equality indicators related to labour of 32 to 36 countries

Data for International Comparisons

PISA 2018

PISA, started by OECD in 2000, is administered every three or four years to measure and compare the educational performance – notably maths, reading, and science – among 15-year-old students across countries all over the world. However, it also contains questions related to the students' views and family background. The pertinent question for this research asks, "What kind of job do you expect to have when you are about 30 years old?".

PISA participants are selected from the population of students in each country according to a two-stage random sampling procedure, so that weighted samples become representative of students who are 15 years old for each country. In the first stage, a stratified sample of schools is drawn. In the second stage, students are selected at random in each sampled school. While 79 countries participated in PISA 2018, the sample for this research comprises the 36 OECD member countries (in 2019), due to the generally available and reliable country-level information on gender equality indicators related to labour.

Roughly 287,000 students from the 36 OECD countries participated in PISA 2018, with 212,000 specifying their expected occupations. The proportion of students who did not specify any occupation ranged from the lowest, with 4% of girls and 6% of boys in Turkey, to the highest, with 67% of girls and 70% of boys in Belgium. OECD cites studies indicating that teenage uncertainty is often associated with low academic performance and low SES. Furthermore, an analysis of PISA 2018 data reveals that uncertainty was more prevalent among boys than girls, lower performers, foreign-born students, and schools lacking career guidance (Mann *et al.* 2020).

Despite these general observations, the OECD does not provide a comprehensive explanation for the high variations in missing data for occupational expectations across particular countries. This lack of clarity is also evident in the work of Coppé (2020), who conducts an extensive analysis of educational and occupational aspirations among Belgian students using PISA 2018 data. However, in the case of Belgium, a *partial* reason could be the relatively high migrant population, as 29% of the students who took the PISA 2018 test did not speak the language at home in which the test was administered.

While some studies focus on analysing the situations of youth uncertainty over their future (Mills & Blossfield 2006; Staff *et al.* 2010; Gutman *et al.* 2014), the primary objective of this thesis is to internationally compare gender differences in occupational expectations among students from the same countries who have concrete ideas. In this context, the countries with missing values for expected occupations generally exhibit similar patterns between girls and boys, albeit with a higher prevalence of uncertainty among boys. Therefore, those who did not specify occupations are excluded instead of using imputation. Consequently, this paper refrains from claiming that the students in the study are representative of all 15-year-olds.

For students who did not identify the final educational levels or occupations of their parents, a listwise deletion approach has been taken, similar to the methodology of Taki (2011b). It is assumed that single parent households are not necessarily being excluded, since some students in such families are still able to answer the education or occupation of the missing parent, if they are known. Furthermore, if parents are unemployed, OECD instructs the students to mention the last occupation held. It should be noted that the distribution of the ISEI scores of the samples used in this analysis generally resemble the distribution of ISEI scores of all students who chose their expected occupations. In total, the final sample size is 165,000 (86,000 girls and 79,000 boys), or on average around 2,400 girls and 2,200 boys per country. Japan's sample size is 1,953 for girls and 1,588 for boys.

As mentioned above, this study uses the weights provided in PISA 2018 to adjust for each student's representativeness for the country. Since it is difficult to develop further weights to adjust for those who are dropped, the representativeness in this study might have been compromised. At the same time, this study compares like-with-like across countries, focusing on individuals who specified their expected occupations and their parents' education and occupations. Therefore, the data is assumed to primarily serve the purpose of examining gender differences in occupational expectations and the key factors contributing to them in the respective countries.

Occupational Categories

As previously mentioned, in the PISA questionnaire, each student is asked about their expected future occupation. According to the ILO, occupation is defined as:

"any productive activity performed by a person, regardless of the type of remuneration received, the duration of the activity, the enterprise, organization or institution in which the activity is performed or the sector of the economy to which it belongs" (ILO 2016).

Thus, occupation includes paid employment, self-employment, unpaid work in a family enterprise or farm, and any other productive activity, such as volunteering or caring for family members, that contributes to the household or society. However, a homemaker or housewife is not categorised as an occupation. The following discusses some of the classification of occupations and issues that relate to this research.

International Standard Classification of Occupations

Each student's response regarding her or his future expected occupation is matched with an internationally standardised occupational code known as the International Standard Classification of Occupations (ISCO), established by the ILO. ISCO has been designed to categorise occupations into well-defined groups based on the tasks and duties associated with each job. Its primary objectives include:

- Serving as a basis for the international reporting, comparison and exchange of statistical and administrative data on occupations.
- Providing a model for the development of national and regional classifications of occupations.
- Offering a system that can be used directly in countries that have not developed their own national classifications.

After the initial ISCO-58, developed in 1957, revisions have been made, resulting in ISCO-68 and ISCO-88. The most recent iteration, ISCO-08, was adopted in 2007 to account for changes in the world of work since 1988. While the update has retained the overall structure of ISCO-88, it has introduced significant changes in certain areas. Subsequently, many countries have updated their national classifications based on ISCO-08, which categorises occupations into 10 major groups, 42 sub-major groups, 130 minor groups, and 436 specific occupations, primarily based on skill level and skill specialisation concepts (ILO 2016). Table 2.2 provides examples of occupations from each of the 10 major groups.

Table 2.2

Major Group	Sub Major Groups	Minor Groups	Unit Groups
	Examples		
0 Armed Forces Occupations	01 Commissioned Armed Forces Officers	011 Commissioned Armed Forces Occupations	0110 Commissioned Armed Forces Officers
1 Managers	12 Administrative and Commercial Managers	121 Sales, Marketing and Development Managers	1222 Advertising and Public Relations Managers
2 Professionals	24 Business and Administration Professionals	243, Sales, Marketing and Public Relations Professional	2431 Advertising and Marketing Professional
3 Technicians and Associate Professionals	33 Business and Administration Associate Professionals	334 Administrative and Specialised Secretaries	3341 Office Supervisors
4 Clerical Support Workers	41 Clerical Services Clerks	411 General Office Clerks	4110 General Office Clerks
5 Services and Sales Workers	52 Sales Workers	522 Shop Salespersons	5221 Shopkeepers
6 Skilled Agricultural, Forestry and Fishery Workers	61 Market-oriented Skilled Agricultural Workers	611 Market Gardeners and Crop Growers	6113 Gardeners
7 Craft and Related Trades Workers	71 Building Workers	711 Building Frame Workers	7111 House Builders
8 Plant and Machine Operators and Assemblers	83 Drivers and Mobile Plant Operators	832 Car, Taxi and Motorcycle Drivers	8322 Car, Taxi and Van Drivers
9 Elementary Occupations	91 Cleaners and Helpers	911 Domestic, Hotel and Officer Cleaners	9112 Cleaners in Offices

Source: ILO 2016

Since the introduction of ISCO-08, several issues requiring attention have been identified for the upcoming update scheduled for 2030. These issues encompass: the need to address outdated occupations and the emergence of new ones; convergence of occupations within Major Groups 2, 3, and 7; inadequate recognition of skills acquired through experience, particularly in supervisory roles and the management of small businesses; and general shifts in skill levels across the major groups, primarily driven by technological advancements (Hunter 2015). The impact of future changes regarding categorisation of expected occupations of high school students remains to be seen, following the ISCO update in 2030 and subsequent PISA surveys.

Japan's occupational classifications

In Japan, occupation is defined by the Ministry of Health, Labour and Welfare (MHLW) as "a continuous human relationship with the objective of obtaining some return in order to sustain a living", "a certain social division of role or a continuous execution of a social role," or "type of work that a person is engaged in to earn a living, including the activities that are performed in exchange for wages or salaries..." (MHLW n.d.c). It is important to note that the concept of occupation differs from that of a career, which has a broader time dimension than an occupation. In the case of Japan, two official occupational classifications are widely recognised and referred to (Takahashi 2018), as explained below.

Japan Standard Occupational Classification

The first official classification is managed by the Ministry of Internal Affairs and Communications (MIC), which oversees the Japan Standard Occupational Classification (JSOC) (MIC 2009). The original version of this classification was developed in 1953 and subsequently revised in 1960 based on ISCO-58. Multiple revisions have followed, with the most recent update occurring in 2009, marking the fifth revision (Iwahashi 2011). JSOC 2009 is the classification currently used for official statistics related to occupational surveys. It comprises approximately 13 major categories, such as: administrative and managerial workers; professional and engineering workers; clerical workers; sales workers; service workers; security worker; agriculture, forestry, and fishery workers; manufacturing process workers; transport and machine operation workers; construction and mining workers; carrying, cleaning, packaging, and related workers; and workers not classified by occupation. Additionally, the index includes approximately 30,000 occupations as examples (Ishii 2009).

JSOC and ISCO exhibit similarities and differences. Each classification offers a hierarchical structure of occupational categories with three levels: major, sub-major, and minor categories. However, distinctions exist in the number of major and sub-major categories. For instance, JSOC comprises 12 major categories, whereas ISCO-08 includes 10. JSOC 2009 incorporates 'service occupations' and 'security occupations' as major categories, which are absent in ISCO-08. Conversely, ISCO-08 encompasses 'elementary occupations' and 'armed forces occupations' as major categories, which are not present in JSOC 2009.

Classification of Occupations for Employment Services

The second type of occupational classification in Japan is known as the Classification of Occupations for Employment Services (ESCO) by the MHLW. Originally developed in 1953, the latest, fifth version was recently updated in 2022 (Japan Institute for Labour Policy and Training 2022; Nishizawa 2007). Unlike JSOC, ESCO is primarily used for practical services related to employment and job searches at the Public Employment Security Offices, known as 'Hello Work,' located throughout the country. Consequently, ESCO encompasses around 19,000 occupations in 15 major categories. In contrast to JSOC, ESCO further disaggregates categories, including medical workers, educators, and social welfare workers, into major occupational categories.

Occupational Categories in Surveys by Nippon Broadcasting Corporation

In addition to the aforementioned official classifications, a more informal occupational classification is utilised in a nationwide opinion survey conducted regularly by the Nippon Broadcasting Corporation (NHK) over many years. NHK defines 'occupations' as continuous jobs held by respondents to earn income (Onodera 2017). Initially, these surveys were predominantly conducted through interviews, involving an open-ended question about the respondent's occupation, followed by detailed follow-up questions. The specified occupation was then coded later. Onodera points out that the concept of occupation posed challenges, as the phrasing of the question influenced the categorisation of occupations. In other words, the results of open-ended questions and subsequent coding varied depending on the surveyor and respondent.

Furthermore, as society evolved, respondents began to be more cautious when asked intrusive questions about their occupations. Consequently, their responses often became vague, such as simply stating 'office worker' or leaving the question blank, which presented challenges in classification. Therefore, starting from 1997, respondents who have a job (to earn a living) have been provided with a list of pre-coded occupational classifications to choose from. These classifications are grouped into nine broad categories, which include those that are very broad, such as technical and skilled worker, clerical and technical worker, manager and supervisor, specialist and freelance worker. Additionally, those who are not primarily employed are asked to indicate whether they are a part-time working housewife, a housewife not working at all, a student, unemployed, or something else.

The challenge of classifying occupations in surveys in Japan is relevant to this research as it can help explain why a significant proportion of Japanese students expect to become general office clerks or office supervisors, as indicated by their responses in PISA questionnaires. This challenge is also evident in the surveys on occupational choices listed in Table 1.1, which reveal that many young individuals anticipate becoming either company workers or civil servants in general. This tendency can be partially attributed to the prevalent practice of hiring generalists in Japan, as discussed in Chapter 1, leading to difficulties in forming a clear vision of their future occupations.

Socio-Economic Indicators

International Socio-Economic Index

In the PISA questionnaire, after coding the students' expected occupations according to ISCO, each occupation is assigned a SES value known as International Socio-Economic Index (ISEI) scores (see Chapter 3). These scores have been developed by sociologists using data from 42 countries, including Japan, encompassing over 200,000 individuals, collected through the International Social Survey Programme (ISSP) (Ganzeboom 2010).

In constructing this index, education was gauged by accounting for the number of years of formal education necessary for each occupation. Income was estimated by verifying the average annual income associated with each occupation in individual countries. Skill level was evaluated by considering both the required level of education and the cognitive complexity of tasks associated with the occupation. Using this information, the researchers have developed a standardised scale of occupational status by combining education, income, and skill level, with higher weights given to education and skill level compared to income.

The ISEI scores that have been developed generally range from 16 to 90, with higher scores denoting higher occupational status. For example, an occupation such as a street sweeper is given 17 points while a medical doctor is given 89 points. The scores are standardised so that the mean score across all occupations in all countries is set to 50, and the standard deviation is set to 10 (Ganzeboom *et al.* 1992). The ISEI scores are meant to be internationally comparable. The key

feature is that it is constructed objectively using quantified indicators for each occupation, unlike prestige scores that are more subjective, as explained below.

Japan's Occupational Prestige Scores

In addition to socio-economic indicators and the social status index (Nagamatsu 2018), discussions in Japan on occupational hierarchies often rely on measures of prestige, which tend to be more subjective. One notable programme dedicated to studying this topic is the SSM survey, conducted by sociologists every decade since 1955. The primary objective of this programme is to carry out research on social class, inequality, social mobility, occupations, education, and social consciousness. In the 1995 survey, respondents were asked to assign prestige scores to 56 major occupational categories within JSOC 2009, which were then used to calculate the occupational prestige of more detailed occupations. The scores derived from this survey have been utilised in various studies in Japan that examine occupational prestige.

In this context, Saito & Misumi (2011) discuss various facets of occupational prestige based on the SSM 2005 survey. These aspects encompass challenges related to measurement, shifts in prestige scores for certain occupations since the 1970s, the significance of education in achieving occupational status, and regional disparities in occupational prestige. While the paper touches on gender-related variations in the assessment of occupational prestige, it does not extensively discuss gender differences among occupational holders. In contrast, as occupational prestige is determined subjectively, Wakita (2012, 2015, 2021) highlights that assessments can vary depending on the individuals engaged in the occupation. For instance, a tendency exists where male nurses working in predominantly female-dominated occupations receive lower ratings, while women in predominantly male-dominated occupations tend to receive higher ratings compared to assessments that are gender-blind. Moreover, in Japan, the assessments of the same occupation can differ based on factors such as, *inter alia*, the type of employment contract and the size of the company.

Discussion

To assess potential major differences in the hierarchy of occupations between ISEI and the commonly used occupational prestige system in Japan, this research applied the occupational prestige scores from the SSM 1995 survey (Sugiura n.d.) to the top 10 occupations expected by Japanese girls and boys in the PISA 2018 questionnaire. The findings indicate that, as most occupations are similar in terms of occupational prestige scores and ISEI scores¹, the average prestige score for girls in the top ten occupations is still lower, at 51, than that of boys, at 60. Additionally, this research also applied the 2018 average income for males and females in each occupation, derived from the Labour Force Survey (MIC 2023a; Nenshu Guide 2023) to the top expected occupations for girls and boys in PISA 2018. The results reveal that the average annual income for girls' occupations was 25% lower than that of boys' occupations, reflecting a similar wage gap for full-time workers observed in the country.

In summary, the gender differences in the averages of the SSM prestige scores and the incomes of the top 10 occupations expected by high school girls and boys in the PISA 2018 data for Japan are consistent with the gender difference in the average ISEI scores. Therefore, although ISEI may not be a perfect measure for assessing occupational status in Japan, it still serves as a suitable proxy and basis for discussing the lower occupational expectations of girls compared to boys in Japan.

¹ Genji (2011) also find that occupational assessments are comparable among Japan, China, Korea and USA.

Gender Equality Indicators

Chapter 4 investigates the relationship between gender differences in occupational expectations and the gender equality landscape, particularly focusing on factors related to the labour market and family roles in the exo/macro systems. Specifically, indicators for this analysis include data on the gender wage gap, the proportion of female managers, unpaid work time by men, and women's views on being a housewife. These variables are primarily sourced from OECD.Stat, mostly for 2018, although some of the data originate from the ILO and United Nations Educational, Scientific, and Cultural Organization. An exception is data for the variable on views on being a housewife, which is obtained from the ISSP 2012 data (ISSP 2014) and the 7th wave of the World Value Survey (Haerpfer *et al.* 2022).

Other potential indicators for assessing the gender equality landscape were considered, including the proportion of female parliamentarians (Wängnerud 2009), welfare regimes, and the level of economic development. However, the proportion of female parliamentarians has not been selected due to its tendency to fluctuate after elections. Indicators representing welfare regimes, such as childcare provision, are also not the most suitable, as the effectiveness of measures to promote gender equality depends on complex interactions with other policy support (Thévenon 2016). Lastly, while wealthier countries tend to exhibit better gender equality outcomes than poorer countries globally, among OECD countries, gender equality does not show a direct correlation with per capita income (Yamaguchi 2019a).

Chapter 3

International Comparison of Gender Differences in Occupational Expectations: Individual Characteristics and Parental Factors within Micro/Meso Systems

This chapter explores the differences in occupational expectations between girls and boys in high school, based on data from PISA 2018. It is an update to Miyamoto (2020) which uses PISA 2015 data. Both studies utilise answers to the question in PISA, 'What job do you expect to have when you are 30 years old?'. As the data are derived from a survey that is uniform across many countries, it is possible to analyse differences in occupational expectations of Japanese high school girls and boys with those of other countries. In particular, since information is quantified, it allows computation and ranking of countries according to gender disparities in the average SES of occupations. While research on occupational expectations is extensive, very few highlight the anomaly of the gender gap in Japan among OECD countries.

The following section presents descriptive statistics derived from the PISA 2018 data, along with the models and methods used for the regression analysis of the determining factors of occupational expectations. Following the presentation of results, a Blinder-Oaxaca decomposition is conducted to examine whether the factors contributing to gender differences in occupational expectations stem from the endowment or coefficient effect, and how these variations manifest between Japan and other OECD countries. The final section summarises the findings and discusses future considerations.

Descriptive Statistics

ISEI Scores and Ratio

This chapter explores gender differences in occupational expectations using the average female/male ISEI score ratio for each country. Unlike other methods that involve dividing the gender difference by either male or female ISEI score, this approach is simpler and more intuitive. Despite experimenting with various methods, the results remained largely unchanged. Hence, this method effectively captures the direction and magnitude of gender differences in ISEI scores, aligning with the research's specific goals.

Table 3.1 presents the average ISEI scores of the expected occupations by gender and by country, listed from the lowest to the highest ratios. The table shows that the only country where the average for girls is significantly lower than that for boys is Japan, with 55.6 for girls compared to 60.1 for boys, resulting in a ratio of 0.93. Korea is also slightly lower at 0.99, but the difference is not significant. In all other countries, girls have higher average ISEI scores than boys. Furthermore, the average of Japanese girls is much lower than those of girls in other countries, which range between 60 to 70 points. In contrast, the country exhibiting the highest ratio of girls' average ISEI score against boys' is the Czech Republic at 1.21, closely followed by Norway at 1.20.

While discerning a straightforward pattern proves challenging, other countries with high ratios (ranging from 1.13 to 1.21) are predominantly Nordic and Former Socialist countries, including Iceland, Finland, Slovakia, Poland, and Lithuania. Conversely, countries with the lowest ratios (ranging from 0.93 to 1.08) encompass a diverse mix from East Asia, lower-income countries of the OECD, and Former Socialist and other European countries, such as Japan, Korea, Netherlands, Mexico, Israel, UK, France, Austria, and Hungary.

Table 3.1: ISEI Scores and Ratios by Gender and by Country²

#	Cnt	ISEI			#	Cnt	ISEI			#	Cnt	ISEI			#	Cnt	ISEI		
		Girls	Boys	Ratio			Girls	Boys	Ratio			Girls	Boys	Ratio			Girls	Boys	Ratio
1	JPN	55.6	60.1	0.93	10	ESP	71.1	65.2	1.09	19	CHE	61.9	55.6	1.11	28	NZL	69.0	61.4	1.12
2	KOR	63.2	63.7	0.99	11	LUX	68.8	63.0	1.09	20	GRC	70.7	63.5	1.11	29	DEU	64.0	56.9	1.12
3	NLD	65.0	62.7	1.04	12	CHL	72.6	66.2	1.10	21	TUR	76.7	68.9	1.11	30	LTU	69.1	61.3	1.13
4	MEX	74.2	71.6	1.04	13	LVA	68.0	62.0	1.10	22	ITA	66.7	59.5	1.12	31	POL	67.9	59.9	1.13
5	ISR	73.4	69.5	1.06	14	BEL	69.8	63.5	1.10	23	PRT	71.3	63.6	1.12	32	SVK	65.1	56.4	1.15
6	GBR	69.8	65.2	1.07	15	CAN	73.3	66.6	1.10	24	DNK	71.8	64.1	1.12	33	FIN	65.4	56.3	1.16
7	FRA	65.6	61.0	1.08	16	USA	72.0	65.5	1.10	25	SVN	65.5	58.4	1.12	34	ISL	70.7	60.0	1.18
8	AUT	62.1	57.7	1.08	17	IRL	71.0	64.2	1.11	26	SWE	68.3	60.9	1.12	35	NOR	68.9	57.6	1.20
9	HUN	58.3	53.8	1.08	18	EST	68.9	62.0	1.11	27	AUS	68.9	61.4	1.12	36	CZE	61.8	51.1	1.21

OECD (2019b) and author's calculations

To provide a better idea of occupational choices and corresponding ISEI scores, Table 3.2 lists the top 10 jobs chosen by students from the Czech Republic, USA, and Japan, disaggregated by gender. The USA is chosen as it is one of the median countries in terms of the ISEI score ratio and is a large non-European economy like Japan.

Table 3.2: Top 10 Expected Occupations of Students

#	Czech Republic						USA						Japan					
	Girls	ISEI	%	Boys	ISEI	%	Girls	ISEI	%	Boys	ISEI	%	Girls	ISEI	%	Boys	ISEI	%
1	Generalist Medical Practitioners	89	7%	Car Mechanics	31	6.9%	Specialist Medical Practitioners	82	16%	Mechanical Engineers	77	4.6%	General Office Clerks	43	10%	Office Supervisors	62	13%
2	Nursing Associate Professionals	56	5%	IT Programmers	75	6.0%	Nursing Professionals	69	9%	Specialist Medical Practitioners	82	4.4%	Nursing Professionals	69	10%	General Office Clerks	43	10%
3	Psychologists	86	5%	Building Electricians	36	5.3%	Generalist Medical Practitioners	89	5%	Athletes	51	4.1%	Child Care Workers	25	9%	Teaching Professionals	76	6%
4	Primary School Teachers	77	5%	Cabinet-Makers	25	2.5%	Veterinarians	84	5%	Generalist Medical Practitioners	89	3.2%	Office Supervisors	62	6%	Building Architects	80	3%
5	Hairdressers	31	4%	Athletes	51	2.4%	Lawyers	87	4%	IT Programmers	75	3.2%	Teaching Professionals	76	4%	IT Programmers	75	3%
6	Lawyers	87	4%	Lawyers	87	2.4%	Psychologists	86	3%	Car Mechanics	31	3.1%	Pharmacists	81	3%	Generalist Medical Practitioners	89	3%
7	Veterinarians	84	4%	Building Architects	80	2.3%	Teaching Professionals	76	3%	Graphic Designers	80	3.1%	Housewives	17	3%	Sports Workers	51	2%
8	Early Childhood Educators	59	3%	Generalist Medical Practitioners	89	2.3%	Graphic Designers	80	3%	Lawyers	87	2.8%	Hairdressers	31	3%	Engineering Professionals	75	2%
9	Specialist Medical Practitioners	82	3%	Machine Operators	29	2.3%	Biologists	81	2%	Engineering Associate professionals	61	2.3%	Nutritionists	65	2%	Pharmacists	81	2%
10	Cooks	27	2%	Police Officers	52	2.3%	Psychotherapists	68	2%	Police Officers	52	2.3%	Shopkeepers	35	2%	Firefighters	46	2%
	Weighted Average Total	70	41%	Weighted Average Total	52	35%	Weighted Average Total	80	52%	Weighted Average Total	69	33%	Weighted Average Total	51	52%	Weighted Average Total	64	47%

Source: OECD (2019b) and author's calculations

² JPN=Japan, KOR=Korea, NLD=Netherlands, MEX=Mexico, ISR=Israel, GBR=United Kingdom, FRA=France, AUT=Austria, HUN=Hungary, ESP=Spain, LUX=Luxembourg, CHL=Chile, LVA=Latvia, BEL=Belgium, CAN=Canada, USA=USA, IRL=Ireland, EST=Estonia, CHE=Switzerland, GRC=Greece, TUR=Turkey, ITA=Italy, PRT=Portugal, DNK=Denmark, SVN=Slovenia, SWE=Sweden, AUS=Australia, NZL=New Zealand, DEU=Germany, LTU=Lithuania, POL=Poland, SVK=Slovakia, FIN=Finland, ISL=Iceland, NOR=Norway, and CZE=Czech Republic.

In the Czech Republic, a large proportion of girls opt for occupations traditionally considered female-dominated with mid to high-range ISEI scores of 50s to 70s, i.e., nursing associate professionals, primary school teachers, and early childhood educators. Only hairdressers have a low ISEI score in the 30s range. Conversely, five occupations have high ISEI scores exceeding 80, predominantly in the medical field. This is not irregular considering that 56% of doctors in the Czech Republic were females in 2019 (OECD 2021a), indicating a balanced gender representation in the medical profession. When the percentages are combined, it reveals that at least 22% of Czech girls in the sample anticipate pursuing occupations with very high ISEI scores.

On the other hand, Czech boys tend to select occupations traditionally viewed as male-dominated, such as mechanics, IT programmers, electricians, cabinetmakers, athletes, building architects, machine operators, and police officers. Within this group, four occupations have ISEI scores in the 20s and 30s, while three occupations are in the 50s to 70s. The weighted average of the ISEI scores for the top 10 occupational choices for girls in the Czech Republic is 70, while it is 52 for boys, indicating a significant disparity.

Regarding the USA, the table reveals that seven out of the top 10 occupational choices for girls have ISEI scores in the 80s, with a notable emphasis once again on the medical profession. On a positive note, it is encouraging to observe that girls hold high occupational expectations, especially considering the continued male dominance in the medical field in the USA, where only 37% of doctors are females (OECD 2021a). It is noteworthy that these expectations contrast with those from forty years earlier in 1979, which included mostly female-dominated categories like secretary, housewife, nurse, elementary school teacher, and hairdresser, in addition to designer, accountant, physician, and manager (Baird 2008).

On the other hand, the study by Reynolds *et al.* (2006) in 2000 points out that, although there is no gender breakdown, American high school students were increasingly becoming unrealistic in their occupational expectations, with two-thirds of seniors planning to become lawyers, doctors, college professors, accountants, or engineers. OECD also cautions that the recent aspirations of American girls indicate “weak labour market signalling and poor understanding of the labour market and individual prospects within it” (Mann *et al.* 2020, p. 25).

When it comes to American boys, the top 10 occupations are predominantly those that are considered male-dominated, including engineers, athletes, IT programmers, car mechanics, and police officers, in addition to the medical profession. Four of these occupations have ISEI scores in the 80s, while one has a score in the 30s. The weighted average ISEI score for the top 10 occupations in the USA is 80 for girls and 67 for boys.

The expected top 10 occupations for Japanese girls mostly consist of those traditionally associated with female-dominated fields, such as general office clerks, nurses, childcare workers, teachers, hairdressers, nutritionists, and shopkeepers. These occupations generally have lower ISEI scores, ranging from the 20s to 40s, as well as some in the mid-range with scores in the 60s to 70s. The only occupation with an ISEI score in the 80s is that of a pharmacist. Additionally, 3% expressed a desire to be a housewife, a role not officially recognised as an occupation by the ILO. Nevertheless, since PISA 2018, OECD has assigned an ISEI score of 17 to this category.

For Japanese boys, many of their top expected occupations are traditionally male-dominated occupations such as building architects, IT programmers, generalist medical practitioners, sports workers, engineers, and firefighters. A total of 8% chose professions with ISEI scores of over 80 – architects, medical doctors, and pharmacists. Unlike the boys of the other two countries, there are no occupations that are in the 20s and 30s. The weighted average ISEI score of the top 10 jobs

for Japanese girls is 51, which is significantly lower than the 64 for Japanese boys, mirroring the large ISEI score difference for the total sample shown in Table 3.1.

In relation to the description of the Japanese labour market in Chapter 1, the top occupation chosen by girls in Japan, reaching 10%, is to become a general office clerk. This is a secretarial or administrative type of job, possibly equivalent to an '*ippan shoku*', This occupation is also prevalent among boys, ranking second at 10% of the sample. Furthermore, 6% of girls and 13% of boys chose to be an office supervisor, possibly a '*sogo shoku*,' which is also a generalist type of job, but with the possibility of being on a management track.

The high proportions of these two types of occupations reflect the Japanese labour market, where companies and the public sector prefer to recruit and maintain generalists rather than specialists, allowing them to assign employees to various types of assignments. The results of these choices by Japanese high school students most likely demonstrate that this type of hiring practice has influenced their occupational expectations, incentivising them to aim for generalist-type jobs to maximise their employment possibilities.

However, it is debatable whether students explicitly specified '*ippan shoku*' or '*sogo shoku*' as their expected career choices, or if they simply listed '*kaishain*' (office worker) or '*OL*' (office lady). Consequently, the National Institute for Educational Policy, the entity overseeing PISA in Japan, was contacted to inquire about how they determined which responses were categorised as office clerks and which as office supervisors. Although they acknowledged the challenges of converting students' responses in Japanese to ISCO codes, they did not provide detailed clarification on their methodology.

This allows for some subjectivity in the categorisation process. To mitigate such concerns, the average ISEI scores of girls and boys were recalculated by excluding the two occupations of office clerk and office supervisor. Instead, medical doctor (ISEI 89) and event planner (57) were added for girls, while sports instructor (51) and engineering technician (54) were added for boys in the top 10. The results indicate that the average ISEI score for girls, at 57, still remains lower than that of boys at 62, as well as those of girls in other countries.

To summarise, in the Czech Republic, girls often choose traditionally female-dominated occupations with mid-range ISEI scores, as well as the medical field which has high ISEI scores and a significant female presence. Conversely, boys opt for male-dominated roles with relatively low ISEI scores, leading to a notable gender disparity in average ISEI scores. In the USA, girls exhibit unrealistically high occupational expectations, particularly in the male-dominated medical sector, while boys tend to pursue traditionally male-dominated occupations with mid to high-range ISEI scores. In Japan, girls prefer female-dominated categories with low to mid-range ISEI scores, while boys select various male-dominated professions generally associated with higher ISEI scores. Thus, while gendered occupational preferences are observed in other countries, Japan stands out with an accentuated gender difference as girls opt for female-dominated roles with low to mid-range ISEI scores, while boys prefer male-dominated occupations with generally higher ISEI scores instead of those with low scores.

Individual Characteristics and Micro/Meso Systems

As elaborated above, the occupational expectations of girls in Japan are significantly lower than those of boys, representing an anomaly among developed countries. This chapter now examines factors in the micro/meso systems that contribute to the occupational expectations of youths. Explained in Chapter 1 and illustrated in Table 1.4, the micro/meso system encompasses individual factors such as educational aspirations and academic competence, along with the educational and occupational backgrounds of parents within the surrounding environment.

These factors will be specifically scrutinised, given that information on them is available in PISA 2018.

Specifically, data are provided on individual characteristics, i.e., a) whether the student expects to go to university for a bachelor's degree; b) maths score; and c) reading score. Data are also provided on the micro/meso systems, i.e., d) whether the mother is a university graduate; e) whether the father is a university graduate; f) ISEI score of the mother's occupation; and g) ISEI score of the father's occupation. Table 3.3 lists the averages of this information by country.

In addition to the maths and reading tests, PISA encompasses a science test. Each of these subjects provides valuable insights into students' cognitive abilities. However, an analysis reveals that science scores exhibit a high correlation with both maths and reading scores, while the correlation between maths and reading scores is comparatively less, although significant. To address the important issue of collinearity, this study strategically focuses solely on maths and reading scores. By doing so, the analytical process is not only streamlined but also ensures a more precise examination of the individual impact of maths and reading scores on the observed trends in occupational expectations. Conversely, the variables representing parents' education and occupation (denoted as d) to e) above) are retained in the model, given their minimal collinearity.

The figures show that, for a), the proportion of Japanese girls expecting to obtain bachelor's degrees, at 0.59, is much lower than that of American girls at 0.92, although it is higher than those of Norwegian and German girls at 0.40. Moreover, it is notable that Japan is practically the only country where the proportion of girls expecting to go to university is lower than that of boys in the same country. This situation reflects reality, as Japan is one of only two OECD countries where girls' enrolment in bachelor's programmes is lower than that of boys (OECD.Stat n.d.), with the other country being Korea.

Despite this situation, for b), Japanese girls have the second-highest average maths score among girls of 36 countries at 532 points, just below Dutch girls at 537 points (see Figure 3.1). In fact, while lower than Japanese boys at 550 points, Japanese girls score considerably higher than boys in 31 other countries, except for the Netherlands, Korea, Estonia, and Canada³. Moreover, according to the OECD, while approximately 22% of Japanese boys and girls emerge as top performers, especially in maths and/or science—marking the highest percentage among OECD countries—only about 4% of girls and 7% of boys anticipate pursuing careers as science and engineering professionals. This stands as the lowest proportion among all 63 countries ranked for this measure (Schleicher 2019). It suggests that, despite the outstanding performance of Japanese girls in maths and science on average, the country would be significantly underutilising its human capital.

On the other hand, for c) reading, with a score of 525 points, Japanese girls fall within the middle range among girls from 36 countries – between Mexico, at 436 points, and Finland, at 557 points. However, Japanese girls outperform Japanese boys, who score 514 points. Indeed, the average performance of Japanese high school students on PISA's reading tests has been a national concern for two decades. Some reasons mentioned for this relatively poor performance, compared to maths and science, include the decline in reading lengthy materials by youngsters and an education system that emphasises extracting necessary information rather than understanding relationships (Tasaki 2017). While Japanese educational institutions are working to address these issues, whether the next PISA results show improvements remains to be seen.

³ In the PISA 2018 full sample, Japanese girls have the second highest average maths score after Korean girls. Again, while lower than Japanese boys, Japanese girls score significantly higher than boys in all other countries, except for Korea and Estonia.

Table 3.3 Individual Characteristics and Factors from the Micro/Meso Systems

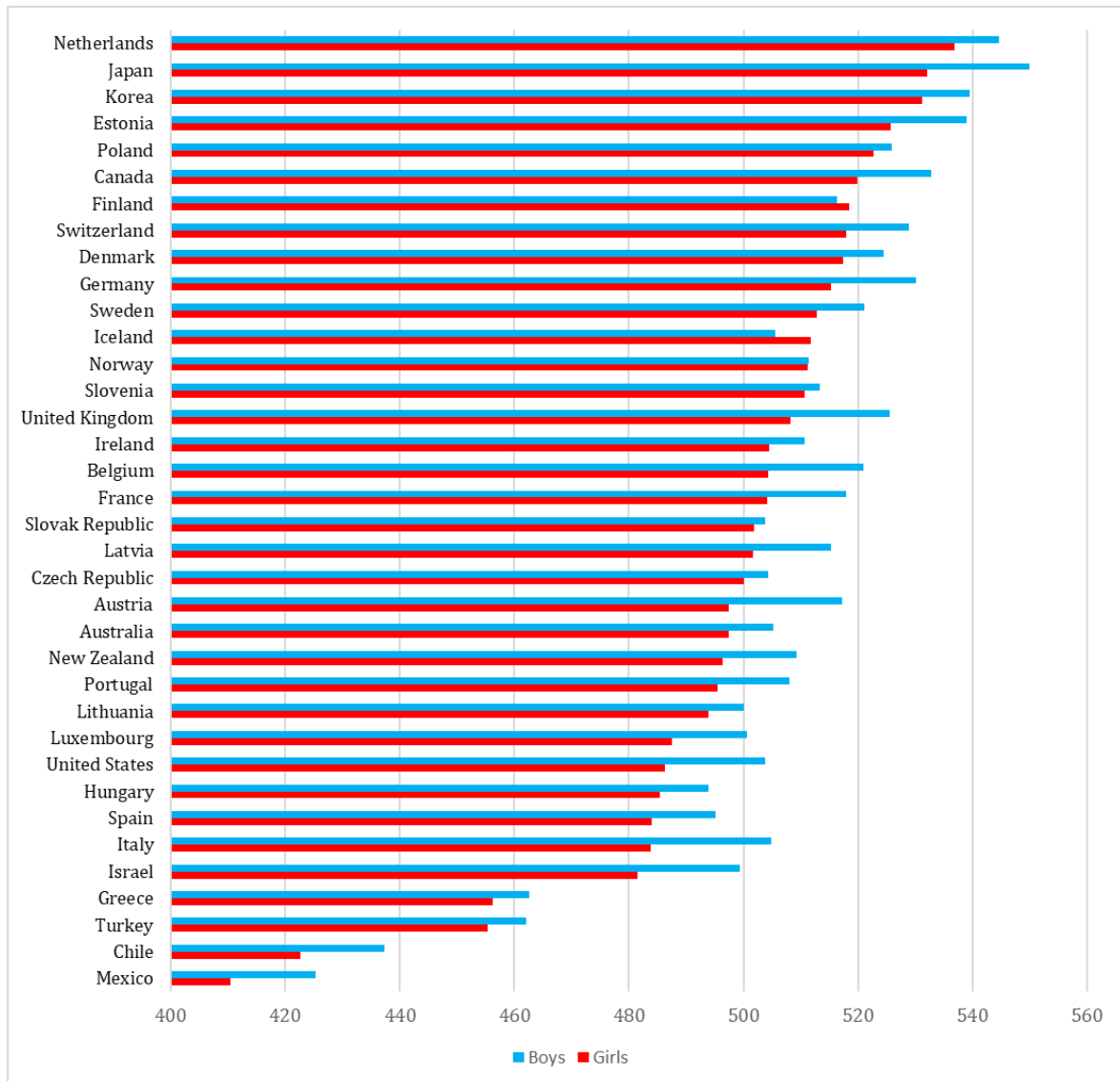
#	Cnt	(a)		(b)		(c)		(d)	(e)	(f)		(g)	(h)	
		Plan Uni		Maths		Reading		Uni Grad		ISEI		N		
		Girls	Boys	Girls	Boys	Girls	Boys	Mother	Father	Mother	Father	Girls	Boys	
1	AUS	0.77	0.58	497	505	531	501	0.46	0.39	49.9	45.6	4,138	3,982	
2	AUT	0.42	0.33	497	517	504	483	0.19	0.21	42.7	43.3	2,003	2,048	
3	BEL	0.55	0.44	504	521	508	491	0.39	0.38	46.0	46.4	1,131	1,009	
4	CAN	0.82	0.69	520	533	548	527	0.51	0.47	51.9	49.5	6,253	5,173	
5	CHE	0.44	0.35	518	529	509	483	0.25	0.29	43.0	48.2	1,784	1,882	
6	CHL	0.85	0.75	423	437	472	458	0.25	0.29	37.3	40.7	2,130	2,054	
7	CZE	0.68	0.50	500	504	512	479	0.20	0.20	43.0	40.7	1,943	1,747	
8	DEU	0.40	0.32	515	530	536	514	0.27	0.31	45.3	46.4	1,286	1,365	
9	DNK	0.73	0.53	517	525	529	503	0.67	0.55	54.8	51.8	1,816	1,682	
10	ESP	0.71	0.55	484	495	511	488	0.39	0.33	41.6	42.2	12,150	11,551	
11	EST	0.61	0.43	526	539	547	522	0.41	0.30	49.0	44.9	1,626	1,476	
12	FIN	0.75	0.60	519	516	557	510	0.56	0.46	49.4	47.7	1,695	1,536	
13	FRA	0.58	0.61	504	518	519	501	0.35	0.37	45.4	46.3	1,736	1,672	
14	GBR	0.62	0.52	508	526	528	512	0.38	0.36	51.2	51.3	4,064	3,468	
15	GRC	0.84	0.73	456	463	484	450	0.38	0.35	43.0	45.0	2,268	2,068	
16	HUN	0.52	0.45	485	494	499	471	0.42	0.38	46.4	40.6	1,721	1,690	
17	IRL	0.71	0.52	504	511	540	516	0.38	0.32	45.9	44.6	1,831	1,622	
18	ISL	0.59	0.41	512	506	507	472	0.65	0.50	56.6	51.3	1,085	946	
19	ISR	0.74	0.74	481	499	510	493	0.53	0.45	55.2	55.6	1,858	1,293	
20	ITA	0.68	0.52	484	505	496	474	0.28	0.25	38.6	42.3	3,533	3,558	
21	JPN	0.59	0.69	532	550	525	514	0.31	0.44	43.8	47.0	1,953	1,588	
22	KOR	0.85	0.79	531	540	533	515	0.05	0.09	42.9	46.6	2,414	2,398	
23	LTU	0.70	0.57	494	500	509	478	0.47	0.35	49.7	43.5	1,882	1,796	
24	LUX	0.58	0.49	488	501	494	473	0.34	0.35	44.7	46.9	1,731	1,561	
25	LVA	0.43	0.35	502	515	505	479	0.42	0.26	49.8	44.6	1,399	1,171	
26	MEX	0.79	0.65	411	425	436	426	0.20	0.22	32.1	38.2	2,468	2,215	
27	NLD	0.70	0.66	537	545	518	495	0.52	0.51	47.2	49.1	1,161	1,029	
28	NOR	0.40	0.25	511	511	531	494	0.29	0.29	56.2	52.7	1,880	1,752	
29	NZL	0.67	0.48	496	509	529	506	0.37	0.29	50.3	47.8	2,060	1,776	
30	POL	0.68	0.54	523	526	538	507	0.31	0.27	45.1	41.9	1,988	1,810	
31	PRT	0.75	0.58	496	508	513	489	0.33	0.25	43.2	44.3	1,925	1,878	
32	SVK	0.70	0.50	502	504	493	456	0.34	0.28	44.4	41.2	1,723	1,540	
33	SVN	0.42	0.27	511	513	520	481	0.35	0.25	46.4	42.9	1,839	1,901	
34	SWE	0.59	0.46	513	521	536	512	0.49	0.41	54.3	50.9	1,697	1,513	
35	TUR	0.89	0.82	455	462	483	460	0.15	0.22	26.0	38.1	2,451	2,474	
36	USA	0.92	0.81	486	504	533	520	0.48	0.41	50.3	47.7	1,437	1,255	

Source: OECD (2019b) and author's calculations⁴

Regarding parents' education, 31% of mothers of the Japanese high school respondents are four-year university graduates, which falls between the 5% of Korea and the 67% of Denmark. For fathers of Japanese students, 44% are university graduates, which falls between the 9% of Korea and the 51% of the Netherlands. While the fathers are more educated than the mothers among Japanese respondents, in 26 other countries, mothers are on average more educated than or as educated as the fathers.

⁴ Average PISA scores are not the same as those published by OECD as the sample for this study only includes students who gave responses regarding their expected occupations and specified their parents' education and occupation. The reading scores for Spain is missing due to implausible student-response behaviour, explained in OECD (2019c).

Figure 3.1: PISA 2018 Maths Scores Among the Sample



Source: OECD (2019b) and author’s calculations

Regarding parents' occupations, the average ISEI score of mothers of Japanese girls shown in d) at 44 points is lower than the mean of 46, falling between the lowest, Turkey, at 26 points and the highest, Iceland, at 56 points. As mentioned above, mothers who are reported as a housewife are attributed an ISEI score of 17 points. Concerning fathers, at 47 points, Japan is above the mean at 46 points, falling between the lowest, Turkey, at 38 points and the highest, Israel, at 55 points, as shown in e). It is noteworthy that the average ISEI scores of mothers and fathers in Japan are not hugely different, despite the large gender wage gap in the country. This could be due to the high proportion of mothers who earn less but are in occupations with similar ISEI scores as the fathers. In addition, as the questionnaire asks to state the previous jobs held if a parent is unemployed, it is possible that non-working mothers could have had occupations with similar ISEI scores as the fathers before they quit.

Factors that Contribute to Occupational Expectations

Model and Method

This section outlines the model designed to analyse the relationships between occupational expectations and the contributing factors. The model is expressed through two equations:

$$Y_i^f = \alpha^f + \sum_{j=1}^7 \beta_j^f X_{ji}^f + e_i^f \quad (1)$$

$$Y_i^m = \alpha^m + \sum_{j=1}^7 \beta_j^m X_{ji}^m + e_i^m \quad (2)$$

In this model:

- The dependent variables Y_i^f and Y_i^m represent the ISEI score of the occupation expected by the student at the age of 30, for females and males, respectively.
- i denotes individual, where f represents female and m represents male.
- α^f and α^m are the country-specific intercepts that capture unobserved variations for females and males, respectively.
- β_j^f and β_j^m (where j ranges from 1 to 7) are coefficients associated with the seven variables of: educational expectation (expecting to go to university or not), academic competence (maths and reading scores), parental characteristics of education of the mother and father (obtained a bachelor's degree or not), and the ISEI score of the mother and father's occupation.
- X_{ji}^f and X_{ji}^m (where j ranges from 1 to 7) represent the values of each variable for females and males, respectively.
- e_i^f and e_i^m are the error terms for males and females.

The model utilises a multiple regression analysis with Ordinary Least Squares (OLS) for each gender within every country to assess the impact of the variables on the ISEI scores of expected occupations. In other words, this method examines the relationships between occupational expectations and the contributing factors among girls and boys in 36 different countries. The coefficients derived from the analysis are presented by country and by gender in Table 3.4.

Results

The results of the analyses of (1) and (2) are shown in Table 3.4. The factors that contribute to the ISEI score of Japanese girls are: plan to go to university, maths scores, mother's ISEI score, and father's ISEI score. For girls of other countries, plan to go to university has positive effects in all the countries, except for France. Countries such as Austria, Switzerland, and Italy have high coefficients of over 17 points. Japan's coefficient of 8.0 points is lower than the average of 34 other countries that had positive effects at 12.7 points.

In terms of maths scores, besides Japan, 19 other countries have positive effects. While the rise of 0.05 point in the ISEI score by increasing 1 point of maths score in Japan is above average of 0.04 points of 20 other countries, it is below France and Hungary, both exceeding 0.06 points. For the reading score, although it is not significant for Japan, when the scores increase, the ISEI scores also increase in 20 other countries. Regarding the education of mothers and fathers (whether they are university graduates), they do not have significant positive effects for Japanese girls nor most other countries.

As for the parents' ISEI scores, aside from Japan, it is significant in 16 other countries for the mother and 15 other countries for the father. While the effect of mother's ISEI score at 0.10 point is higher than the average of 0.08 points of 16 other countries, the effect of the father's ISEI at 0.06 point is the same as the average of 15 other countries.

Next, regarding boys in Japan, significant variables that increase the ISEI score of their future expected occupations include the plan to go to university, math scores, mother's ISEI score, and father's ISEI score, similar to the girls. In addition, father's education is also significant at the 10% significance level. For boys in other countries, the plan to go to university is significant for all countries except France, just like their female counterparts. The coefficient of 7.8 points for the Japanese boys' plan to go to university is lower than the average of 12.1 points of 34 other countries with positive effect.

**Table 3.4: Factors Influencing ISEI scores:
Non-Standardised Coefficients by Gender and by Country**

Cnt	Girls							Boys						
	Uni Plan	Maths Score	Reading Score	Uni Grad		ISEI		Uni Plan	Maths Score	Reading Score	Uni Grad		ISEI	
				Mother	Father	Mother	Father				Mother	Father	Mother	Father
AUS	17.0 ***	0.02 **	0.01	0.5	0.7	0.00	0.01	20.3***	0.02**	0.03***	0.51	0.36	-0.01	0.11***
AUT	17.4 ***	0.01	0.04 ***	-0.2	2.8 **	0.08 ***	0.02	12.8***	0.00	0.06***	-1.05	3.16**	0.02	0.11***
BEL	14.3 ***	0.01	0.04 **	0.2	-2.4 *	0.05	0.03	14.4***	0.04**	0.04**	-0.82	2.13	-0.02	0.02
CAN	14.8 ***	0.00	0.02 **	0.0	0.8	0.03	0.04 **	18.5***	0.01	0.02***	-0.74	2.32**	0.02	0.10***
CHE	17.6 ***	-0.01	0.05 ***	2.6 **	0.2	0.06 **	0.08 ***	13.9***	-0.01	0.06***	2.76**	1.60	0.04*	0.12***
CHL	8.8 ***	0.02	0.02 *	-0.7	1.3	0.04 *	0.00	12.4***	0.03***	0.02*	-3.12**	2.25*	0.03	0.11***
CZE	16.0 ***	0.03 **	0.05 ***	-2.5 *	0.4	0.14 ***	0.04	17.4***	0.02**	0.04***	0.38	-0.73	0.10***	0.08***
DEU	12.6 ***	0.02	0.04 ***	2.5 *	0.1	0.03	0.06 *	12.1***	0.04***	0.03**	-0.25	-0.4	0.07**	0.14***
DNK	14.3 ***	0.04 ***	-0.01	0.5	-0.5	0.05 **	0.04 **	13.6***	0.01	0.05***	-0.63	-1.02	0.08***	0.11***
ESP	8.8 ***	0.04 ***	(omitted)	0.4	0.0	0.00	0.03 *	11.1***	0.05***	(omitted)	-0.08	-0.05	0.01	0.04*
EST	11.2 ***	0.02	0.01	2.3 **	2.1 *	0.08 ***	-0.01	9.6***	0.04***	0.02*	0.47	1.49	0.03	0.08***
FIN	16.5 ***	0.04 ***	0.03 ***	0.9	-0.9	0.12 ***	0.08 ***	12.8***	0.07***	0.02	0.50	0.51	0.12***	0.10***
FRA	-2.2 **	0.06 ***	0.05 ***	-0.5	2.4 **	0.03	0.05 **	-0.8	0.04***	0.06***	0.99	2.67**	0.02	0.10***
GBR	11.9 ***	0.02 **	0.01	0.4	2.6 **	-0.01	0.03	12.7***	0.02	0.03***	0.07	-0.60	0.01	0.10***
GRC	11.2 ***	0.02 **	0.04 ***	1.2	0.8	0.01	0.03	6.5***	0.02*	0.03***	-0.10	-0.21	0.05**	0.08***
HUN	15.5 ***	0.07 ***	0.02	0.3	1.8	0.05 **	0.06 **	13.1***	0.05***	0.02**	1.08	-1.00	0.08***	0.10***
IRL	9.9 ***	0.05 ***	0.02 *	-0.3	0.7	0.03	0.01	12.3***	0.03**	0.04***	-0.70	-1.26	0.01	0.10***
ISL	11.3 ***	0.02 **	0.00	0.3	2.1 **	0.01	0.04 *	10.6***	0.00	0.04***	1.06	2.87**	0.01	0.10***
ISR	8.4 ***	0.00	0.00	-0.3	0.6	-0.01	0.01	6.1***	0.01	0.01	-1.47	1.64	-0.05*	0.05**
ITA	18.1 ***	0.00	0.04 ***	1.8	0.6	0.06 **	0.06 **	14.6***	0.00	0.04***	-0.06	1.73	0.02	0.11***
JPN	8.0 ***	0.05 ***	0.00	-0.3	0.3	0.10 ***	0.06 **	7.9***	0.04***	0.00	-0.81	2.07*	0.06**	0.06**
KOR	6.2 ***	0.04 ***	0.02 **	0.8	0.9	0.02	0.05 **	5.2***	0.03***	0.02***	0.33	1.38	0.01	0.04*
LTU	13.1 ***	0.00	0.05 ***	-1.0	0.7	0.05 **	0.03	10.9***	0.01	0.06***	-0.37	-2.17*	0.07***	0.08***
LUX	12.5 ***	0.02	0.03 ***	-0.1	1.1	0.00	0.02	12.0***	0.03***	0.02***	-0.03	-1.02	0.00	0.09***
LVA	8.1 ***	0.04 ***	0.00	-1.4	-0.2	0.11 ***	0.06 **	7.9***	0.04**	0.04***	2.13	-0.84	0.07***	0.08***
MEX	6.4 ***	0.00	0.01	0.2	-1.7	0.03	0.01	6.2***	0.02**	-0.01	-0.35	0.50	0.00	0.03
NLD	13.2 ***	0.02 *	0.03 ***	-0.4	0.6	0.08 ***	0.01	10.4***	0.03**	0.03**	-0.85	0.54	0.12***	0.10***
NOR	13.1 ***	0.03 ***	0.01	-0.4	1.8 *	0.04 **	0.06 ***	16.6***	0.04***	0.04***	0.87	0.33	0.06**	0.12***
NZL	11.4 ***	0.03 ***	0.01	-0.5	0.9	0.03	0.02	13.8***	0.05***	0.02*	1.07	-0.24	0.02	0.09***
POL	14.8 ***	0.01	0.03 ***	-1.4	2.0	0.06 **	0.03	11.6***	0.03**	0.04***	1.07	-0.22	0.05**	0.11***
PRT	15.5 ***	0.03 ***	0.01	0.1	-0.6	0.00	0.04 *	11.3***	0.03***	0.03***	0.85	-1.52	0.00	0.11***
SVK	15.3 ***	0.05 ***	0.02 **	-0.7	-0.4	0.10 ***	0.04	12.7***	0.05***	0.02**	-1.04	0.90	0.06**	0.11***
SVN	9.5 ***	0.03 ***	0.05 ***	-1.6	-1.4	0.10 ***	0.04	8.4***	0.05***	0.04***	0.99	-0.01	0.02	0.13***
SWE	15.6 ***	0.01	0.02 **	-1.3	1.0	0.00	0.09 ***	16.9***	0.03**	0.01	-1.48	0.89	0.07***	0.11***
TUR	4.9 ***	0.03 ***	0.01	-0.4	0.5	0.02	0.00	6.1***	0.05***	-0.01	-0.68	1.08	0.04	0.02
USA	16.9 ***	0.01	0.00	-3.2 ***	1.6	0.01	0.01	15.5***	0.00	0.03***	-0.15	0.93	0.04	0.05*

Source: OECD (2019b) and author's calculations * p<0.1, ** p < 0.05, *** p < 0.01.

In summary, the coefficients related to the plan to attend university are relatively modest among both Japanese girls and boys. This may be attributed to the prevalence of job categories such as 'general office clerk' and 'office supervisor,' which tend to have lower ISEI scores compared to certain specialist occupations. Furthermore, in Japan, mothers' occupations exert a notably higher influence on girls compared to Japanese boys and girls of other countries, surpassing the impact of fathers' occupations. This suggests that mothers' occupations might be serving as role models for their daughters' expected occupations.

As a caveat, the plan to go to university may not be the cause of higher occupational expectations, but higher occupational expectations could be driving them to plan on going to university. In other words, there could be endogeneity, reverse causality, simultaneity, or circular reasoning.

Thus, a binomial logistic regression is conducted using the plan to attend university as the dependent variable, with the ISEI score of the expected occupation, maths and reading scores, as well as the parents' education and ISEI scores as explanatory variables.

The analysis reveals that the ISEI score, math score, and parental education levels significantly influence the plan for university enrolment for both girls and boys in Japan. Specifically, individuals with higher ISEI scores and math scores exhibit increased odds of pursuing university education. Furthermore, the odds ratios for father's and mother's education (whether they have attended university or not) are notably high, indicating a substantial impact on the aspiration for university enrolment. However, reading scores and mother's occupation do not show a significant effect on plan for university enrolment in this context.

This indicates that, for both girls and boys, the parents' education affects the plan to go to university, which affects the ISEI score of the expected occupation; but the parents' education does not affect the ISEI score directly. Furthermore, the father's occupation affects the plan to go to university and expected occupation, but the mother's occupation only affects the expected occupation and not the plan to go to university. This could be because, in Japan, mothers with university degrees do not necessarily assume prestigious occupations once they quit for child raising. Furthermore, the results showing that Japanese students have mediocre performance in reading comprehension and that it has no significant impact on their career choices or university plans may reflect an education system and society that prioritise maths.

The R-squared values, indicative of explained variances, exhibit considerable variability. In the case of Mexico, Israel, and Turkey, there are lower fits for girls, ranging between 0.05 and 0.07. For the former two countries, only the coefficients regarding the intention to attend university are significant, and for Turkey, maths score is also significant. A similar pattern emerges for boys, where, in addition to the plan to attend university, father's occupation is significant for Mexico, and maths score is significant for Israel.

Conversely, Switzerland, Czech Republic, and Hungary demonstrate higher R-squared values, ranging from 0.37 to 0.38 for girls. In these cases, all variables except father's education and occupation are significant for the Czech Republic and Hungary, while all variables except maths score and father's education are significant for Switzerland. Boys in the Czech Republic and Australia show R-squared values of 0.40 to 0.42, where all variables except mother's and father's education are significant for the Czech Republic, and the same, plus mother's occupation, is not significant for Australia. Overall, the models are less optimal for the lower-income members of the OECD and exhibit a better fit for Former Socialist countries. Japan falls within the lower-middle range, with R-squared values of 0.14 for girls and 0.12 for boys.

Blinder Oaxaca Decomposition

The previous section showed that in Japan, and in most other OECD countries, the ISEI scores of girls and boys are generally associated with the expectation to go to university and maths and/or reading scores. In addition, the ISEI scores are related to the occupations of the parents, which implies that social class still exerts an effect. However, it is necessary to decompose the factors to examine the extent to which high average values or high average effects contribute to the gender differences in the ISEI scores. For example, an analysis of the gender wage gap can illustrate the extent of lower pay for women due to their lower education compared to males and the extent of lower pay even with the same level of education.

Model and Method

For this purpose, a Blinder-Oaxaca decomposition is carried out using the estimation results from the preceding section to assess whether, for instance, the effect of planning to go to university is

higher on ISEI scores for girls or boys when comparing only those who plan to go to university. This is called the coefficient effect. On the other hand, one can also observe that the average effect is higher because either more boys or girls plan to go to university when assuming that the effect is the same. This is called the endowment effect⁵.

The following explains the process of deriving the last equation (3).

$$\bar{Y}_i^f = \alpha^f + \sum_{j=1}^5 \beta_j^f \bar{X}_{ji}^f \quad (1)$$

$$\bar{Y}_i^m = \alpha^m + \sum_{j=1}^5 \beta_j^m \bar{X}_{ji}^m \quad (2)$$

$$\bar{Y}^m - \bar{Y}^f = (\alpha^m - \alpha^f) + \sum_{j=1}^5 \beta_j^m (\bar{X}_j^m - \bar{X}_j^f) + \sum_{j=1}^5 (\beta_j^m - \beta_j^f) \bar{X}_j^f \quad (3)$$

In equation (3):

- The term $\bar{Y}^m - \bar{Y}^f$ measures the average gender gap in ISEI scores within each country, where \bar{Y}^m and \bar{Y}^f denote the average ISEI scores of expected occupations for male and female students, respectively, in each country.
- m is for male students and f is for female students.
- α^m and α^f are the country-specific intercepts.
- β_j^m and β_j^f represent the five coefficients for educational expectation, academic competence, and the ISEI score of the parents' occupations for each country. The parents' education variables are excluded from the model as they did not have a significant effect on the ISEI scores of both boys and girls.
- \bar{X}_j^m and \bar{X}_j^f denote the average values of the variables for male and female students within the country.

The term $\beta_j^m (\bar{X}_j^m - \bar{X}_j^f)$, representing the endowment effect, explains the gender difference in the ISEI scores based on gender variations in the averages of the variables – educational expectations, academic competence, and parents' occupations⁶. On the other hand, regarding the coefficient effect, denoted as $(\beta_j^m - \beta_j^f) \bar{X}_j^f$ and focusing on girls' average characteristic \bar{X}_j^f for the seven variables in each country, the gender difference in ISEI scores is determined by the gender variation in the estimation coefficients $(\beta_j^m - \beta_j^f)$. This assumes that the average educational expectations, academic competence, and the parents' occupational ISEI scores are equal between the genders in each country.

Results

Table 3.5 shows the results of the Blinder-Oaxaca decomposition. A positive endowment effect suggests that the higher average value of boys, such as in maths scores, contributes to an increase in boys' average ISEI score compared to girls when one assumes that the two genders have the same coefficient. Conversely, a negative endowment effect indicates a situation where the higher average value among girls contributes to an increase in girls' average ISEI scores compared to boys when one assumes that the two genders have the same coefficient. In parallel, a positive

⁵ Sugihashi (2009) expresses concerns about utilising the Blinder-Oaxaca Decomposition in gender wage gap analysis. The argument posits that the endowment effect already encompasses discrimination, rendering it inadequate to address discrimination solely through the coefficient effect. In the context of the current research, this suggests that the low educational expectations of Japanese females may, in part, stem from discrimination or ingrained gender norms that discourage girls from pursuing four-year university education, consequently diminishing the endowment effect.

⁶ The Blinder-Oaxaca decomposition here assumes that the girls are the same as the boys' values.

coefficient effect suggests that the impact of the variable is higher for boys when the two genders have the same average value. Conversely, a negative coefficient effect indicates that the impact of the variable on the average ISEI scores is higher for girls than boys when they have the same average value.

Table 3.5: Blinder-Oaxaca Decomposition on the Factors that Affect ISEI

Cnt	Endowment Effect					Coefficient Effect				
	Uni Plan	Maths Score	Reading Score	Mother ISEI	Father ISEI	Uni Plan	Maths Score	Reading Score	Mother ISEI	Father ISEI
AUS	-3.3 ***	0.2 **	-0.4 **	0.01	0.01	1.9 ***	0.2	6.9 *	-0.8	4.3 ***
AUT	-1.5 ***	0.2	-0.7 **	-0.03	0.02	-1.5 ***	-5.5	10.6	-2.4	3.6 **
BEL	-1.5 ***	0.2	-0.7 **	0.07	0.02	0.2	13.1	-1.2	-3.2 *	1.6
CAN	-1.9 ***	0.1	-0.3 ***	0.02	0.05	2.7 ***	3.2	4.9	-0.4	3.7 ***
CHE	-1.6 ***	-0.1	-1.3 ***	0.06	0.05	-1.1 **	-1.0	0.8	-0.8	2.5
CHL	-0.9 ***	0.2	-0.2 *	0.05	0.01	2.7 **	7.7	1.1	-1.0	4.4 ***
CZE	-2.9 ***	0.1	-1.8 ***	0.04	0.01	0.7	0.0	-8.1	-0.8	1.7
DEU	-1.0 ***	0.3	-0.8 **	-0.01	-0.04	-0.3	8.9	-4.1	0.6	3.0 *
DNK	-2.8 ***	0.3 *	0.3	0.08	0.05	-0.4	-13.2	31.2 ***	1.5	3.1 *
ESP	-	-	-	-	-	-	-	-	-	-
EST	-2.1 ***	0.3	-0.2	-0.11	0.01	-0.6	9.7	6.2	-3.0 *	3.5 **
FIN	-2.5 ***	-0.1	-1.5 ***	0.09	-0.08	-2.1 **	16.3	-6.5	0.1	1.7
FRA	-0.1	0.8 ***	-0.9 ***	0.02	0.09	0.8	-6.2	7.3	0.1	2.5
GBR	-1.3 ***	0.4 **	-0.2	0.00	0.04	0.2	-4.1	8.2	0.4	2.3 *
GRC	-1.3 ***	0.2 *	-1.2 ***	0.01	0.02	-3.5 ***	-2.4	-1.6	0.9	1.6
HUN	-1.1 ***	0.6 **	-0.6	-0.01	-0.06	-1.1	-6.4	1.9	1.1	0.3
IRL	-1.9 ***	0.3 **	-0.4 *	-0.01	-0.02	1.4 *	-6.9	9.4	-1.3	3.2 ***
ISL	-2.1 ***	-0.1	0.2	0.01	0.01	-0.1	-10.2	19.6 ***	0.3	3.9 **
ISR	0.0	0.1	-0.1	-0.05	0.02	-1.7	3.8	0.9	-2.7	3.0 *
ITA	-3.0 ***	-0.1	-0.7 ***	0.05	0.04	-1.8 **	3.1	4.5	-2.0 *	2.3
JPN	0.8 ***	0.9 ***	0.0	0.02	0.10	0.1	-5.9	-2.4	-1.6	0.1
KOR	-0.4 ***	0.3 **	-0.3 **	-0.07	0.00	-0.7	-7.2	3.8	-0.4	-0.2
LTU	-1.7 ***	0.0	-1.5 ***	0.10 *	0.02	-1.4	5.7	7.1	1.2	1.2
LUX	-1.1 ***	0.2	-0.7 ***	0.01	0.04	-0.3	8.9	-2.8	-0.4	2.3
LVA	-0.6 ***	0.6 **	-0.1	0.13	0.05	0.1	-3.1	14.2 *	0.3	1.2
MEX	-0.9 ***	0.1	-0.1	0.01	0.00	-0.1	10.9 *	-7.7	-1.1 *	1.6 *
NLD	-0.6 **	0.2	-0.8 **	0.07	0.00	-1.9	3.5	-4.0	1.5	4.6 **
NOR	-2.0 ***	0.0	-0.2	0.02	0.01	0.9 ***	4.3	14.6 **	1.1	2.8 *
NZL	-2.1 ***	0.4 ***	-0.2	0.03	0.04	1.2 *	9.3	5.0	0.0	3.1 **
POL	-2.1 ***	0.0	-0.9 **	0.01	0.00	-1.6 **	8.9	5.3	0.3	2.9 *
PRT	-2.7 ***	0.4 **	-0.2	0.00	0.01	-2.4 **	1.9	10.6	0.3	2.9 **
SVK	-2.9 ***	0.1	-0.9 **	-0.11	0.02	-1.3	0.3	0.0	-1.6	3.2 **
SVN	-1.3 ***	0.1	-1.9 ***	0.05	-0.01	-0.1	8.8	-3.4	-2.3	4.5 ***
SWE	-1.9 ***	0.1	-0.5 **	-0.01	0.11	0.6	11.6	-3.4	3.6 **	1.0
TUR	-0.4 ***	0.2 **	-0.2	0.00	0.00	1.0	12.2 **	-6.4	0.6	1.0
USA	-1.8 ***	0.2	-0.1	-0.02	0.02	-0.7	-5.3	13.0	2.2	2.2

Source: OECD (2019b) * p<0.1, ** p < 0.05, *** p < 0.01.

Note: Spain is missing due to omitted scores for reading. See Footnote 4.

Coefficient Effect

When examining the coefficient effects first (right side of the table), no variable produce consistent results for more than half of the countries, except for the father's ISEI score. More specifically, an increase in the father's ISEI score lead to an increase in the boy's ISEI score relative to that of a girl in 19 countries. Conversely, in four countries, mothers' occupations exhibit slightly stronger positive effects on girls' occupational expectations, albeit with significance only at the 10% level. These findings closely resemble those obtained from the analysis of PISA 2015 data, which might suggest that, in many countries, social class remain more closely associated with fathers' or husbands' occupations than with mothers' or wives' occupations, aligning with Goldthorpe's Conventional View. However, no particular pattern of country grouping is detected, as those aligning with the Conventional View span a wide range from Anglo-Saxon, Former Socialist, Southern European to Nordic countries.

Regarding Japan, none of the variables are statistically significant for the coefficient effect. This is different from the analysis with the PISA 2015 data (see Box 3.1). In other words, after controlling for the proportion of those planning to go to university, maths and reading scores, as well as the ISEI scores of mothers and fathers, there is no statistically significant difference in the ISEI scores of the expected occupations between girls and boys.

Box 3.1: Difference between PISA 2015 and PISA 2018 Data

In Miyamoto's analysis of 2020, using PISA 2015 data, the findings regarding the coefficient effects differ from those from the PISA 2018 data, although the endowment effects are similar. Firstly, the earlier coefficient effect was negative for the plan to go to university. This means that when girls planned to go to university, the average ISEI score of their expected occupation was higher than that of boys who had similar plans. Secondly, in the PISA 2015 data, when the ISEI scores of fathers' occupations were controlled, the coefficient effect for boys was significantly higher than for girls. This meant that, in 2015, boys were either more encouraged by their parents or perceived their fathers as role models more than girls, leading them to aspire to more prestigious occupations compared to girls.

The difference between the results of PISA 2015 and 2018 suggests that, three years later, an average girl planning to go to university no longer expect to secure an occupation with a significantly higher ISEI score than an average counterpart boy. However, the lower proportion of girls planning to go to university compared to boys in PISA 2018 (59% vs. 69%) still lowers the average ISEI score of girls against boys. Additionally, the lack of a significant difference in the effects of fathers' occupations on the ISEI scores of boys and girls might indicate that parents are no longer encouraging boys particularly more than girls, boys are not necessarily perceiving their fathers as greater role models compared to girls, or both.

In this context, an analysis of the motivations for attending university indicates that girls attribute greater importance to university education than boys, aligning it more closely with their envisioned career. In the 19th Longitudinal Survey of Newborns in the 21st Century (2001 Cohort) conducted in 2021, which inquires about the reasons for attending the specific university that students are enrolled in, allowing for multiple reasons, nearly half of the females responded that it was related to their aspired occupation, while only 35% of males made this choice (MEXT 2021a). Furthermore, 37% of females selected the reason that the course was interesting to them, whereas only 25% of males did. Conversely, while 39% of males chose the university because they were likely to be accepted, this percentage was slightly lower at 35% for females. However, approximately a quarter of both females and males similarly responded that attending the specific university was advantageous for employment. While these results do not necessarily

indicate that female university students hold high occupational expectations, they underscore the seriousness accorded to their university education, linking it more closely to their aspired occupations compared to boys.

Table 3.6 Reasons for Choosing the Attending University

Reasons	Females	Males
Related to the aspired occupation	49%	35%
Interesting course	37%	25%
Likely to be accepted	35%	39%
Good atmosphere	34%	21%
Proximity to home	27%	25%
Advantage for employment	26%	25%
Parents/relatives' recommendation	15%	11%
Teacher's recommendation	14%	15%

Source: 19th Longitudinal Survey of Newborns in the 21st Century, (MEXT 2021a)

Endowment Effect

Regarding the endowment effect, the plan to go to university significantly increases girls' average ISEI scores compared to those of boys in 32 countries. Only in Japan is the endowment effect negative. This indicates that, while girls tend to have higher average ISEI scores than boys in many other countries, driven in part by a greater proportion of girls planning to attend university than boys, the situation is reversed in Japan, where a higher proportion of boys planning to go to university contributes to their higher average ISEI scores compared to girls.

To be specific, results show that, when the proportion of Japanese girls planning to go to university is equivalent to that of boys, a 1% increase in the girls' proportion elevates their average ISEI score by 0.8 points. Concerning maths scores, in 13 countries, the higher average scores achieved by boys have a more significant effect on raising their ISEI scores compared to girls. This is particularly evident in Japan, where the endowment effect of 0.9 is the highest among the countries. To rephrase, when the average maths score for Japanese girls is equivalent to that of boys, a 1-point increase in the girls' average maths score elevates their average ISEI score by 0.9 points.

In other words, the lower occupational expectations of Japanese girls compared to boys can be attributed to two main factors: fewer girls planning to go to university and their lower average maths scores compared to boys. On the other hand, while no endowment effect for reading scores is evident in Japan, it is observed in 21 countries. This suggests that the higher average reading scores of girls compared to boys in many countries contribute to the higher average ISEI scores of girls relative to boys.

In summary, the Blinder-Oaxaca decomposition indicates that, on average in Japan, boys exhibit higher occupational expectations due to a greater percentage planning to attend university than girls, along with their higher math scores. Conversely, in most other countries, girls generally demonstrate higher occupational expectations, attributed to their larger proportion planning to go to university than boys and higher reading scores. While the countries where girls display significantly higher occupational expectations than boys are often found in Nordic or Former Socialist countries, the nuances of these patterns in relation to individual characteristics and parental factors require further exploration.

Summary and Discussion

This section examined gender differences in occupational expectations among high school students in 36 OECD countries using PISA 2018 data. The comparison revealed that only in Japan, girls expect occupations with significantly lower SES than boys. The study explored this unique situation by analysing ISEI scores as the dependent variable.

Regression analyses, following prior research, explored the impact of educational expectation, academic competence, and parental characteristics on expected ISEI scores for both genders. Findings indicate that in Japan, the plan to go to university, maths scores, and parental ISEI scores positively influence both girls' and boys' ISEI scores. Similar trends are observed in many other OECD countries, with the addition of reading scores, a contrast to the Japanese case.

To further analyse the factors behind the lower average occupational expectations for girls in Japan, a Blinder-Oaxaca decomposition was undertaken. The aim was to determine whether this disparity could be attributed to the gender difference in coefficient effect or the endowment effect. The results show that, in Japan, the lower proportion of girls planning to go to university and their lower maths scores relative to boys reduce their occupational expectations.

Contributing Factors to the Lower Educational Aspirations of Girls

Following the above result, it is essential to understand the factors contributing to girls having lower aspirations for higher education compared to boys in Japan. This phenomenon contrasts with a global trend where, with the exception of Japan, Korea, and Germany, more girls are attending university than boys. Thus, to gain a deeper understanding of the underlying reasons for the smaller proportion of girls attending university in Japan, it is necessary to explore references related to developing countries or historical literature for developed countries.

Assuming that educational aspirations correlate with actual attainment, literature on the economics of education highlights two explanations for the gender gap: labour market discrimination against women and parental discrimination against daughters (Kingdon 1997). Concerning the former, Kingdon's research in India, utilising a Blinder-Oaxaca decomposition, reveals lower unexplained returns on education for women compared to men, presumably due to labour market discrimination.

Pasqua (2005) also points to gender bias among parents in developing countries, specifically a preference for investing in sons' education. Consequently, daughters are often assigned household responsibilities, including caregiving for the elderly, which diminishes the perceived necessity for their education. Other studies on developing countries reveal that parents spend less on their daughters' education compared to sons, even among the highest income groups in Nepal (Khanal 2018) or in rural Ethiopia (Delelegn 2007).

In developed countries, Goldin (1992, 1995) highlights the lower economic returns to college education for women compared to men in the USA for those who graduated between 1900-1920 and 1940-1960. Additionally, she notes the trade-offs with marriage and childbearing for the earlier cohort. However, she points to the indirect economic benefits of college-educated women, particularly in the second cohort and those who graduated after 1980, by marrying college-educated men who subsequently earned more compared to men with only a high school education.

Behrman *et al.* (1986) also discuss the issue of female university enrolment in the USA during the 1970s from the perspective of parents' allocation of human capital investment. They conclude that parents do not favour boys' education, if girls' returns are included through the marriage market by finding husbands at universities. These earlier studies in developed countries suggest

that the economic returns to college education for women were contingent on marriage through assortative mating.

In Japan, Nagase & Nagamachi (2002) show that between 1984 to 1994 when the share of educational costs in household expenditures generally started rising, parents were spending more on boys as opposed to girls for university education. More recently, the national survey on educational expenditure for children shows that parents in Japan still spend less for their daughters' education than their sons' in junior and senior high schools (MEXT 2022c).

The lower educational investments towards daughters in Japan can be explained by the gender differentiated views of the parents. A survey conducted by Yamamoto & Watanabe (2016) indicates that, while 85% of mothers preferred and 82% expected their sons to go to university, the corresponding figures for their daughters were only 60% and 46%, respectively. The study further identifies a gender difference in mothers' value towards education, with 46% considering education important for their sons but only 23% for their daughters.

In addition, calculations from the 15th Longitudinal Survey of Newborns in the 21st Century (2001 Cohort) reveals that, while 18% of parents with a son hope that he will start working after high school and 47% after university, the corresponding figures for parents with a daughter are 22% and 39%, respectively (MHLW 2017). These data clearly demonstrate that parents in Japan have lower educational aspirations for their daughters compared to their sons, potentially lowering the educational aspirations of the daughters themselves.

The parents' lower expectations toward their daughter's education compared to their sons are linked to returns on university education, as evidenced in the significant gender wage gap. For example, while the statistics indicate that university educated women earn 80% of their male counterparts, Nagamachi (2021) criticises that this figure is based on a small subset of women who continuously work as regular employees until the age of 60. She argues that the gender gap would be higher for the majority of university-educated women who temporarily pause their careers for child-rearing and later engage in irregular employment. Additionally, she mentions that studies suggesting high returns to women's university education are primarily derived from calculating the husband's income through assortative marriage.

Investments and returns to education are also linked to the specific occupations that parents envision for their daughters. In a study conducted by Yamamoto & Hosokawa (2017), mothers expressed a desire for their daughters to pursue a career but anticipated breaks during child-rearing. Consequently, they preferred occupations that required qualifications or certificates facilitating re-employment, many of which did not necessarily involve attending university. The study highlights the limited employment opportunities for women, particularly those with children, and emphasises the negative consequences of a professional career on marriage. Ultimately, the study concludes that a gender role division persists, depicting men as breadwinners and women as family caregivers.

Contributing Factors to the Underperformance of Girls in Maths

Regarding maths, the OECD points out that girls' underperformance compared to boys is related to several factors, such as their lack of confidence in their own abilities in maths, which is significantly influenced by the learning environment that fosters or undermines their perception (OECD 2015). In this context, teachers hold stereotypical ideas about boys' and girls' academic strengths and weaknesses (CAO n.d.b). Parents in Japan also hold lower expectations and provide less encouragement for girls to pursue STEM occupations compared to boys. For example, according to a survey by a human resources information company, while 74% of fathers and 76% of mothers desired their sons to pursue science as opposed to humanities, only 60% of fathers

and 64% of mothers wished the same for their daughters (AIDEM 2022). This parental attitude may reflect occupational segregation in the labour market, potentially discouraging girls from investing effort to achieve competence in maths and science. This, in turn, creates a vicious cycle, further lowering their occupational expectations.

In this regard, several studies present the correlation between gender gaps in maths performance with the gender equality landscape of countries. For example, Guiso *et al.* (2008), using the PISA 2003 data, show that gender-equal cultures are associated with reducing the gender gap in maths scores in favour of girls among 40 countries. Indeed, as shown in Table 3.2 and Figure 3.1, in several Nordic countries such as Finland, Iceland and Norway, known as highly gender-equal countries, girls have equivalent or higher average maths scores than boys. On the other hand, Anghel *et al.* (2020), using PISA data from 2003 to 2015 and the WEF's Gender Gap Index, discover that the maths gender gap is associated with gender equality primarily in low-income countries. Given that Japan's ranking in WEF is comparable to some low-income countries, as explained in the Introductory Chapter, this finding might be applicable in the case of Japan.

While not specifically addressing mathematical competence, van Langen & Dekkers (2005) explain why fewer high school girls opt to study maths and science in many countries, potentially resulting in weaker performance in standardised tests. They attribute this phenomenon to various factors, including the demanding and inflexible job market characteristics of STEM occupations, where salaries, career prospects, and working conditions are not significantly better than in other professions. In particular, these fields pose challenges for females to work part-time, take breaks, and find role models or mentors.

Secondly, a stereotypical view persists, indicating that STEM is difficult, unappealing, and predominantly geared towards males. Thirdly, the authors discuss the impact of the presence or lack of government policies in promoting STEM for females, which includes initiatives like student information provision, mentoring, networking, summer camps, and competitions. They also highlight positive examples of larger IT companies facilitating flexible working conditions and implementing family-friendly personnel policies, which are particularly benefiting females.

All of this relates to the norms in society that perpetuate gender stereotypes, suggesting that women are inferior to men in quantitative skills (OECD 2015). This, in turn, unconsciously influences girls' performance in and attitudes towards maths, as well as educational and occupational choices. The OECD concludes that the analysis of PISA results strongly indicate that gender gaps in school achievement are not determined by innate differences in ability. In particular, even though the average maths score of Japanese girls is lower than that of Japanese boys, it has been one of the highest among both girls and boys of OECD countries.

The results from the Blinder-Oaxaca decomposition revealed no significant gender difference in ISEI scores between a Japanese girl and boy planning to attend university or with the same maths scores. On the contrary, it showed that if the proportion of girls planning to go to university or their average maths score matched those of boys, their ISEI score will become higher than that of boys. This indicates the potential to elevate the average occupational expectations of girls by increasing the proportion of female students pursuing four-year degrees in Japan and motivating them to enhance their performance in maths. Given that Japanese girls rank internationally superior in maths proficiency, an effective strategy involves providing targeted career guidance to boost their confidence and promote university enrolment, including in the STEM field. As seen in Table 3.2, in several Nordic countries such as Finland, Iceland, and Norway, girls have equivalent or higher average math scores than boys. This phenomenon suggests the importance of schools to emphasise that females can be equally capable in maths as males. Therefore, a collaborative effort, involving parents, teachers, policymakers, and opinion leaders, is imperative

in encouraging girls to pursue university education and strive for excellence in maths. It is noteworthy that this, in turn, could contribute to the potential economic growth and well-being of Japanese society.

Chapter 4: International Comparison of Gender Differences in Occupational Expectations: Factors Related to the Gender Equality Landscape within Exo/Macro Systems

The preceding chapter examined individual characteristics and parental factors within the micro/meso systems, elucidating their roles in shaping gender disparities in high school students' occupational expectations. In contrast, this chapter focuses on factors within the exo/macro systems. Specifically, it investigates whether Japan continues to exhibit the lowest ISEI score ratio by girls against boys among OECD countries, after controlling for individual characteristics and parental factors. Furthermore, it explores the potential influence of gender equality landscape factors on this phenomenon. In addition, the chapter conducts a multilevel regression to determine individual and country-level factors that impact girls' ISEI ratios. The content of this chapter is mostly derived from Miyamoto (2021), incorporating updated data and adjustments to enhance accuracy and clarity.

Determinants of Girls' ISEI Compared to Boys

Model and Method

To analyse the difference between a girl's expected ISEI score of her future occupation and the average ISEI score of boys in the same country, a multiple regression analysis using OLS with country-specific effects is conducted. This comparison helps shed light on individual, surrounding and societal factors that may shape career expectations differently for girls and boys, contributing to a broader understanding of gender dynamics in occupational choices. The model is expressed as follows:

$$ISEIRatio_{ki} = \frac{Y_i^f}{\bar{Y}_k^m} = \alpha_k + \sum_{j=1}^5 \beta_j X_{jki} + e_{ki} \quad (1)$$

In this model:

- $ISEIRatio_{ki}$, the dependent variable, represents the proportion of a girl's ISEI score compared to the average ISEI score of boys within the same country k , indicating gender-related distinctions in ISEI scores specific to each country.
- The subscript i pertains to the individual, f is female, and m is male.
- α_k signifies the country-specific intercept, obtained from country dummies, which controls the influence of unobserved characteristics in each country k . This allows the model to isolate the specific impact of the independent variables on the dependent variable.
- β_j is the coefficient vector associated with five variables j : expectation to go to university (binary dummy variable), maths score, reading score, and the ISEI scores of the mother's and father's occupations.
- X_{jki} encompasses the values associated with the corresponding coefficient and variable, reflecting that individual-level variables can vary across both girls and countries.
- e_{ki} is the error term, representing unobserved or random variability for individual i in country k , capturing factors not explained by the predictors.

Results

With these parameters, Table 4.1 presents OLS results, indicating statistical significance at the 1% level for all variables. Notably, the plan to go to university exhibits the highest standardised coefficient at 0.314, followed by maths scores at 0.116, reading scores at 0.097, and then the

mother's and father's ISEI scores. In the case of Japan, despite girls achieving extremely high average maths scores, the average is lower than that of boys. Furthermore, the proportion expecting to go to university is low compared to boys (see Chapter 3). Therefore, the combination of these factors could be contributing to reducing the ISEIRatio of girls.

Table 4.1: Coefficients of the Individual and Surrounding Factors

N = 86,059 (53,916 with weights)			Adjusted R-squared = 0.944		
Variable	Coefficient	Standard Error	t	P> t	Standard Coefficients
Expect University	0.2052	0.0028	73.0	0.000	0.314
Maths Score	0.0004	0.0000	13.8	0.000	0.116
Reading Score	0.0003	0.0000	12.0	0.000	0.097
Mother's ISEI	0.0008	0.0001	13.1	0.000	0.057
Father's ISEI	0.0007	0.0001	12.2	0.000	0.052

#	Cnt	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	#	Cnt	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	#	Cnt	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
1	JPN	0.331	0.047	7.11	0.000	0.237 0.426	13	ESP	0.503	0.044	11.47	0.000	0.414 0.633	25	BEL	0.530	0.045	11.8	0.000	0.439 0.622
2	KOR	0.340	0.047	7.22	0.000	0.244 0.436	14	EST	0.505	0.048	10.62	0.000	0.409 0.602	26	HUN	0.535	0.044	12.24	0.000	0.446 0.619
3	NLD	0.414	0.047	8.84	0.000	0.319 0.510	15	PRT	0.516	0.045	11.57	0.000	0.425 0.606	27	AUT	0.543	0.044	12.26	0.000	0.453 0.605
4	ISR	0.444	0.045	9.77	0.000	0.351 0.575	16	GRC	0.516	0.042	12.23	0.000	0.431 0.602	28	ITA	0.544	0.043	12.67	0.000	0.457 0.632
5	CAN	0.448	0.048	9.35	0.000	0.350 0.545	17	NZL	0.522	0.046	11.37	0.000	0.429 0.615	29	LVA	0.554	0.045	12.31	0.000	0.463 0.646
6	USA	0.450	0.046	9.8	0.000	0.357 0.544	18	POL	0.523	0.047	11.22	0.000	0.428 0.617	30	CHE	0.561	0.046	12.3	0.000	0.468 0.654
7	GBR	0.469	0.047	10.07	0.000	0.375 0.536	19	SWE	0.523	0.047	11.05	0.000	0.427 0.619	31	SVK	0.565	0.044	12.82	0.000	0.475 0.654
8	DNK	0.492	0.047	10.41	0.000	0.396 0.588	20	CHL	0.524	0.040	13.13	0.000	0.443 0.624	32	DEU	0.572	0.047	12.25	0.000	0.477 0.666
9	IRL	0.492	0.046	10.64	0.000	0.398 0.586	21	FIN	0.525	0.048	10.95	0.000	0.427 0.622	33	SVN	0.574	0.046	12.55	0.000	0.481 0.667
10	FRA	0.496	0.045	10.94	0.000	0.404 0.564	22	TUR	0.526	0.041	12.95	0.000	0.443 0.608	34	ISL	0.584	0.046	12.6	0.000	0.490 0.678
11	MEX	0.499	0.037	13.32	0.000	0.423 0.588	23	LTU	0.530	0.045	11.84	0.000	0.439 0.620	35	CZE	0.620	0.045	13.92	0.000	0.529 0.710
12	AUS	0.501	0.046	10.9	0.000	0.407 0.594	24	LUX	0.530	0.044	12.12	0.000	0.441 0.592	36	NOR	0.634	0.047	13.37	0.000	0.538 0.730

Source: OECD (2019b)

In the regression analysis examining the girls' ISEI ratio relative to the boys' average ratio of the country, a notable observation emerged regarding the high R-squared value of 0.944. This might be attributed to collinearity between the girls' ISEI ratio and the country-specific intercept, which captures unobserved, distinct factors of the country that could be influencing the overall ISEI ratio. In other words, the strong correlation between the girls' ISEI ratio and the country-specific intercept suggests that a substantial portion of the variance in the dependent variable is explained by the unique characteristics of each country. As a result, the interpretation of the R-squared should be approached cautiously, considering the potential impact of the country intercept on the girls' ISEI ratio.

Table 4.1 also illustrates the country-specific intercepts derived from the OLS regression using the model, in the order of low to high coefficients. The figures reveal that Japan's coefficient is the lowest at 0.331, significantly lower than the highest, which is Norway at 0.634. This finding suggests that, even after controlling for individual characteristics and parental factors, Japan still maintains the lowest proportion of average ISEI scores of girls compared to boys of the same country. High country-specific intercepts suggest potential factors, such as cultural norms that encourage females to pursue successful careers, the existence of supportive policies for women's employment, and the prevalence of female role models. Conversely, low country-specific intercepts may indicate the presence of entrenched gender stereotypes, lower levels of female educational attainment, and limited employment opportunities for women. Accordingly, the following section examines related factors in greater detail.

Gender Equality Landscape Factors

To investigate why Japan maintains the lowest proportion of girls' ISEI scores compared to boys', even after controlling for individual characteristics and parental factors within micro/meso systems, this section now explores the gender equality landscape within exo/macro systems. This examination focuses on aspects related to the labour market and cultural norms, given that, unlike males, females often contemplate their future careers in conjunction with their role in taking care of the family, as explained in Chapter 1.

From this perspective, and shown in Table 1.4 in Chapter 1, the following variables are selected as factors related to the gender equality landscape:

- f) Gender wage gap among all workers (including part-time employees)
- g) Share of female managers among all managers
- h) Amount of unpaid work time by men (measured in minutes per day)
- j) Women's opinions on whether being a housewife is fulfilling, using a scale from 'strongly agree' as -2 to 'strongly disagree' as 2.

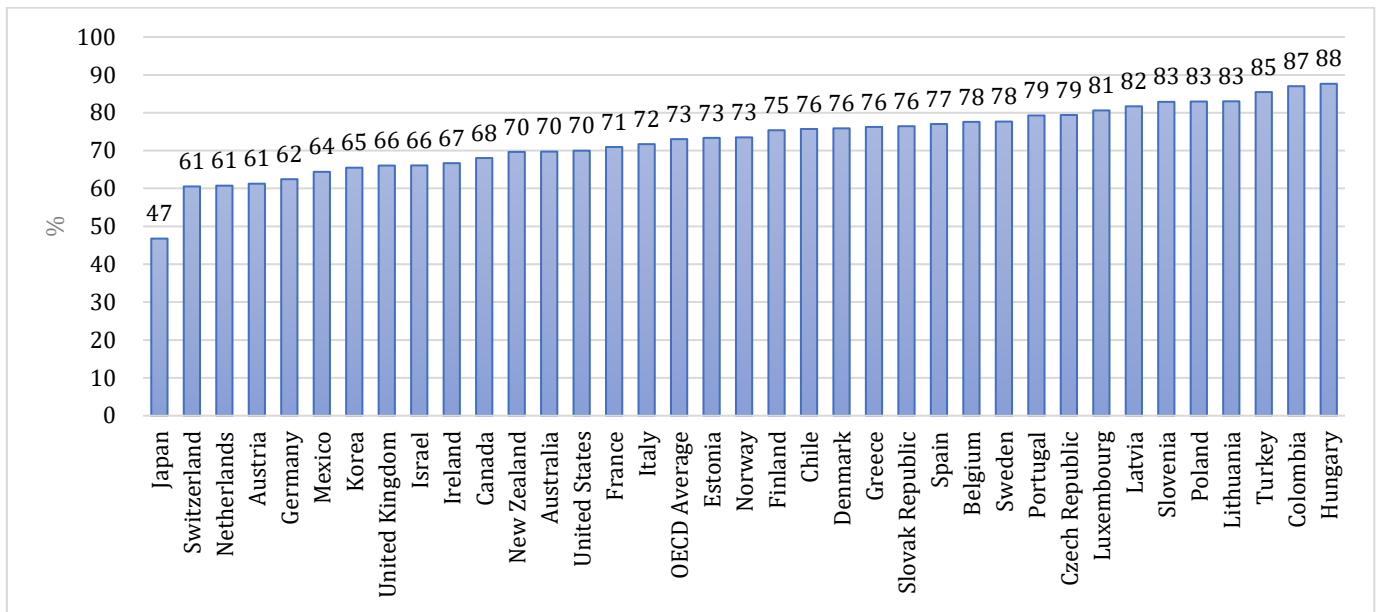
Since country averages are used, there is only one value per country for each variable. f) and g) are common indicators utilised to assess the extent of women's economic empowerment in a country. However, while wage gap is typically measured among full-time employees, this indicator uses data for all workers. As explained in Chapter 1, a high proportion of Japanese women are in non-regular part-time jobs. Therefore, comparing the gender wage gap only among regular full-time employees fails to provide a comprehensive picture of gender inequality in Japan. On h), the limited time men spend on household chores and childcare – based on the norm of gender roles – is considered as a major bottleneck for women to advance their careers in Japan (Adachi 2018; MHLW n.d.a; Nemoto 2013; Ouchi 2012; LinkedIn Japan 2020; Yamaguchi 2019a).

Data for j) are acquired from the ISSP 2012 dataset (ISSP 2014) and the 7th wave of the World Values Survey (Haerpfer *et al.* 2022). Utilising similar data, Knight & Brinton (2017) demonstrate that the extent of women's economic empowerment across 17 European countries is not easily explained by a straightforward shift from traditional to liberal egalitarian views. Nevertheless, data from a larger number of OECD countries related to the role of being a housewife may exhibit some correlation with the occupational expectations of girls.

In checking for collinearity of the four indicators, the lowest correlation was found between f) and g) at 0.22, whereas the highest was observed between g) and h) at 0.77. While the correlation of the latter is considered strong, it is important to note that these indicators capture different aspects of gender dynamics. Moreover, multicollinearity becomes a concern when correlations can significantly impact the reliability of the results, typically above 0.80. Nevertheless, when considering the potential interplay of these indicators and their distinct contributions to the overall analysis, careful interpretation of the results is needed.

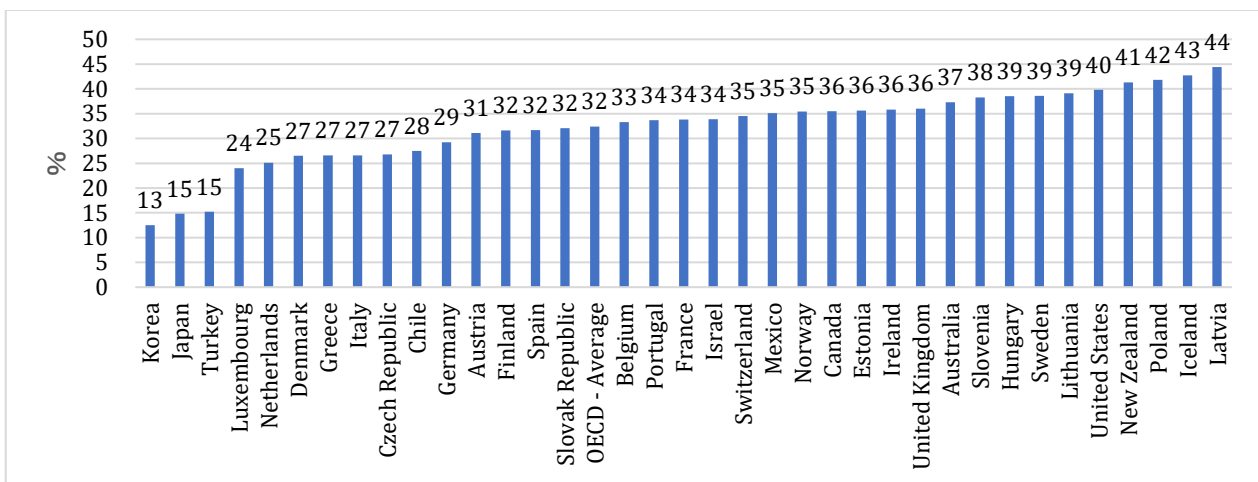
With this understanding, the statistics for f) to j) are presented in Figures 4.1 to 4.4. These graphs illustrate that, for f), Hungary has the smallest wage gap, with women's average wage at 88% of that of men, while Japan has the largest gap, with women's average wage at only 47% of that of men. Regarding g), Latvia has the highest share of female managers at 44%, while Korea has the lowest share at 13%, followed by Japan at 15%. As for h), Danish men spend the most time on unpaid work, with an average of 186 minutes per day, while Japanese men spend the least, at 41 minutes.

Figure 4.1: Percentage of Earnings by Females Relative to Males, All Workers 25–64-year-old



Source: OECD.Stat. mostly 2018 data, except Japan's latest was for 2012.

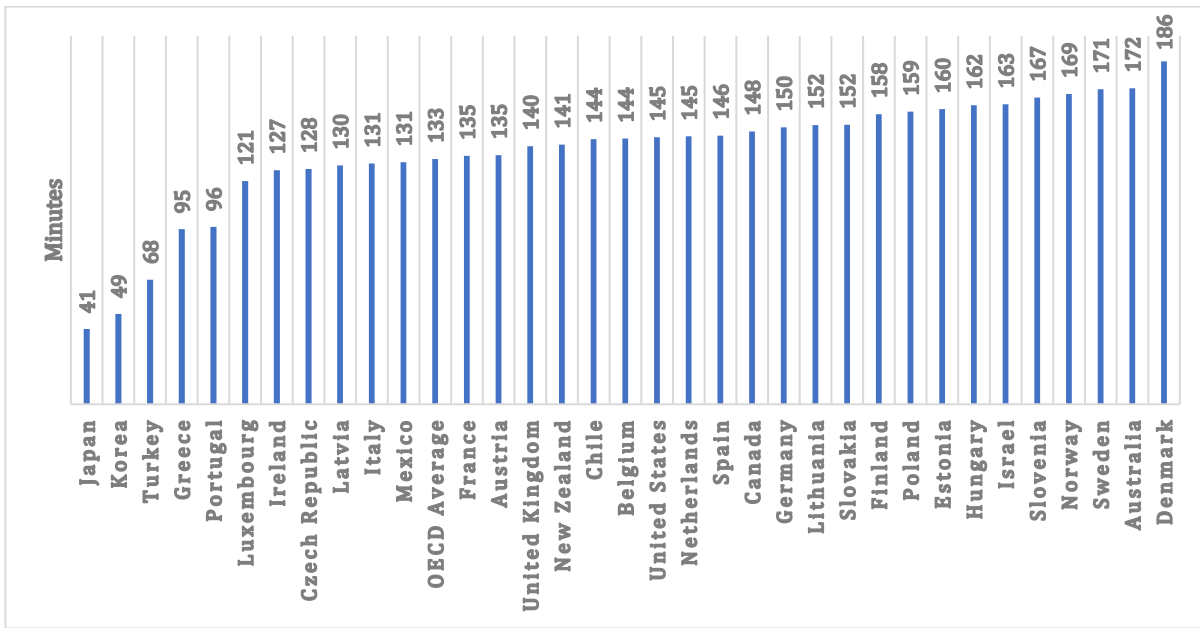
Figure 4.2: Share of Female Managers



Source: OECD.Stat, 2018 data

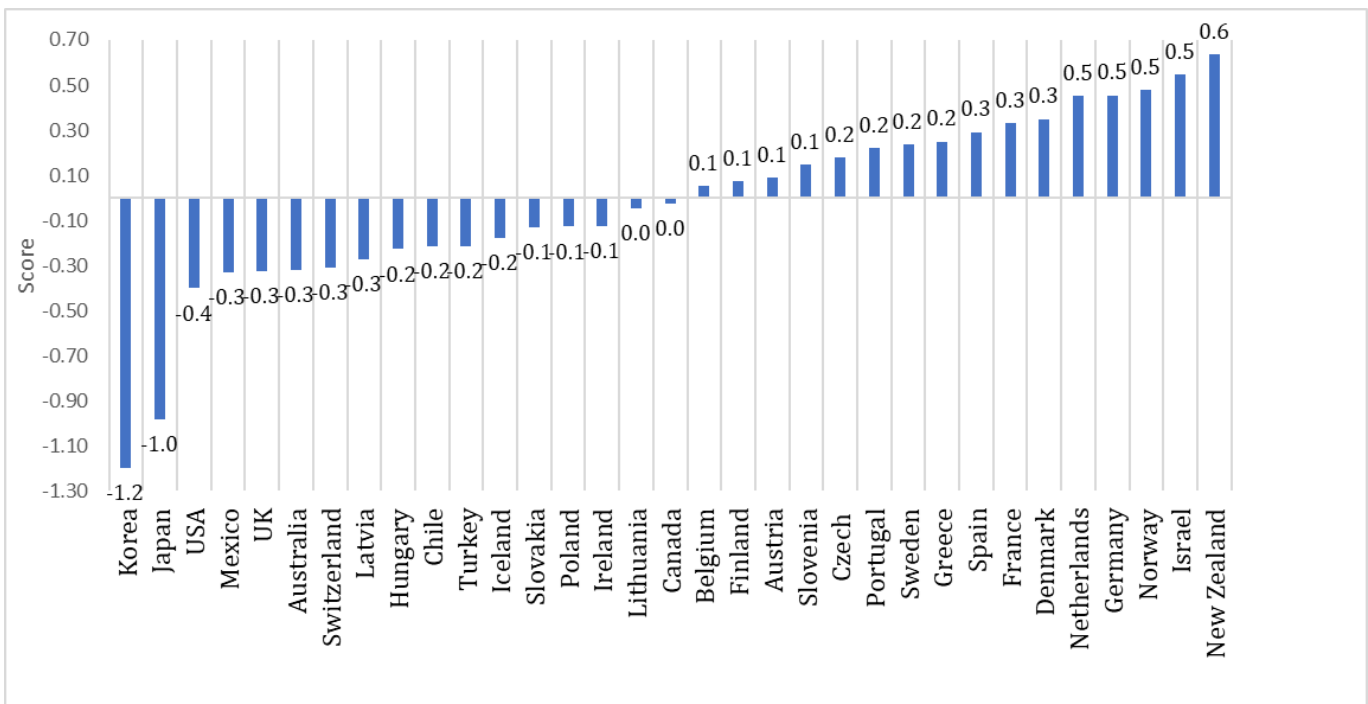
For j), the data show that Korean women exhibit the highest level of agreement in considering being a housewife as fulfilling compared to being a working woman, scoring -1.2. Japanese women closely follow with a score of -1.0. Conversely, New Zealander women express the lowest level of agreement, scoring 0.6. In this context, negative scores generally indicate more traditional views, while positive scores reflect more progressive views. These data indicate that on all five variables, Japan exhibits one of the most traditional stances in terms of women's economic empowerment, career development, as well as the division of roles within the household.

Figure 4.3: Men's Unpaid Work Time (Minutes per Day)



Source: OECD.Stat, 2018 data.

Figure 4.4: Views on Being Housewives



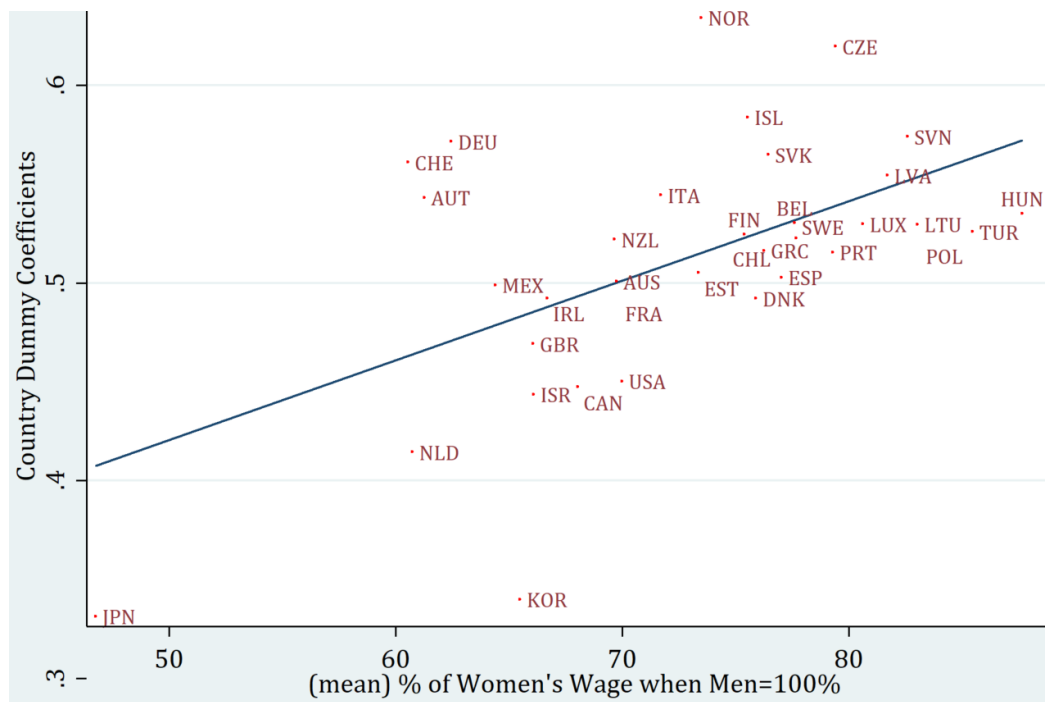
Note: Smaller scores are more positive towards views on being a housewife.

Source: ISSP 2014, Haerper *et al.* 2022, and author's calculations.

The examination now focuses on how each of the gender equality landscape factors relates to the country-specific intercepts in the regression model (1). These intercepts, represented by country dummies, reflect the average ISEI score ratio of girls against boys in the country, after controlling for individual characteristics and parental factors from the micro/meso systems. To do this, the country-specific intercepts from the model are plotted against each of the gender equality

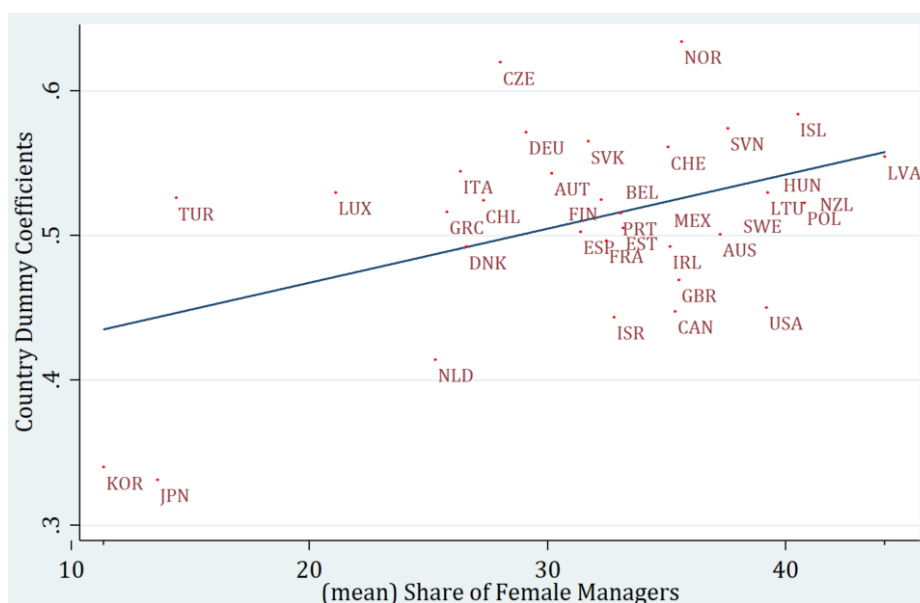
landscape variables to illustrate the relationships. Figures 4.6 to 4.9 show a general trend of increasing country-specific intercepts as countries' gender equality landscape improves, i.e., smaller wage gap, higher proportion of female managers, longer unpaid work time by men, and less traditional view on being a housewife. Since Japan has the lowest or second lowest value of gender equality for all four variables, it is not surprising to see the country being placed in the lower left-hand in all the graphs.

Figure 4.5: Relationship between Country-Specific Intercepts (Dummy Coefficients) and Gender Wage Gap



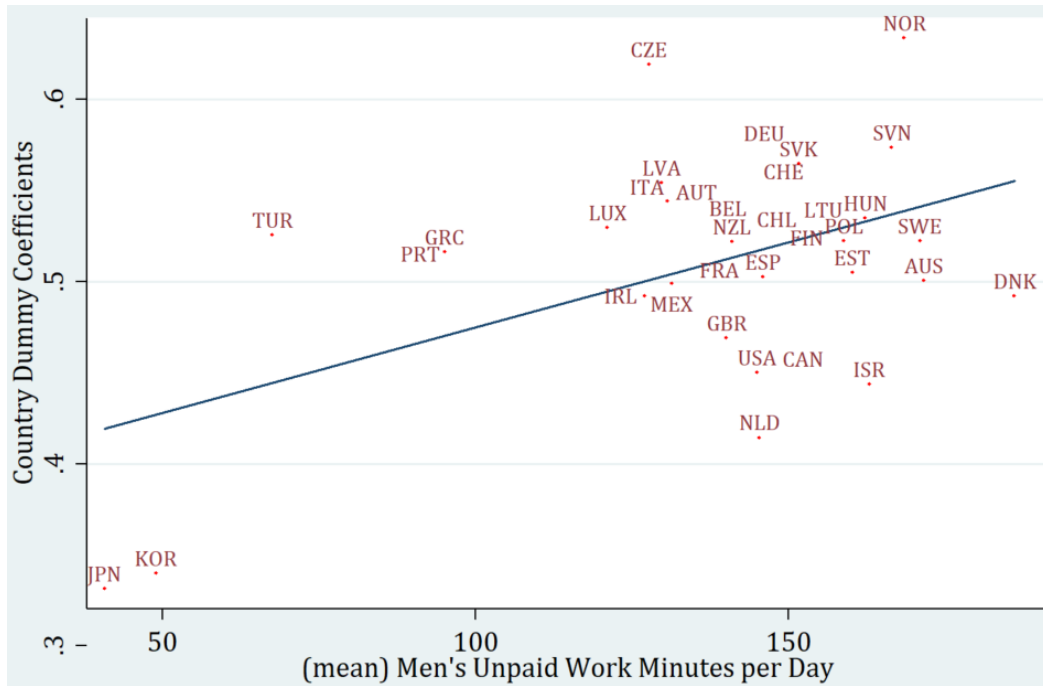
Source: OECD.Stat (n.d.), OECD (2019b)

Figure 4.6: Relationship between Country-Specific Intercepts (Dummy Coefficients) and Proportion of Female Managers



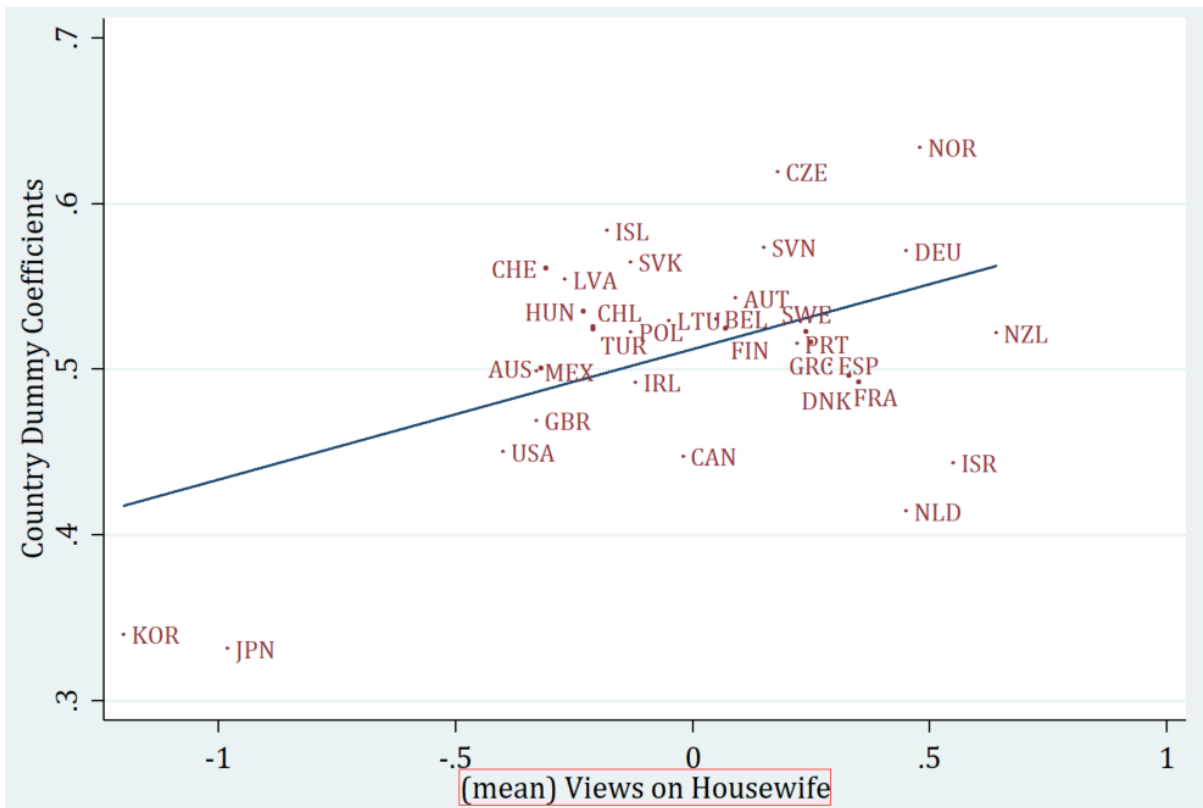
Source: OECD.Stat (n.d.), OECD (2019b)

Figure 4.7: Relationship between Country-Specific Intercepts (Dummy Coefficients) and Men's Unpaid Work Time



Source: OECD.Stat (n.d.), OECD (2019b)

Figure 4.8: Relationship between Country-Specific Intercepts (Dummy Coefficients) and Views on Housewife



Source: OECD.Stat (n.d.), OECD (2019b), ISSP (2014), Haerpfer *et al.* (2022)

Country-Specific Effects

Model and Method

Next, sequential OLS regressions are performed to examine the relationships between the country-specific effects (referred to as the country-specific intercepts above that were obtained from the previous estimation (1)) and each of the four gender equality landscape factors individually. This sequential approach aims to assess the unique impact of each variable on the observed country-specific variations.

The model is as follows:

$$\alpha_k = c_j + \beta_j X_{jk} + e_{jk} \quad (2)$$

where:

- α_k is the dependent variable, representing the country-specific effect for country k , obtained from the estimation using equation (1).
- c_j is the constant term for variable j .
- B_j is the coefficient associated with each of the four gender equality variables j of: gender wage gap, share of female managers, unpaid work time spent by males, and views on being a housewife. These variables are introduced sequentially for the analyses.
- X_{jk} is the value of each gender equality variable j for country k .
- e_{jk} is the error term for each variable j for country k .

Following the individual analyses, a multiple regression is conducted, incorporating all four gender equality variables simultaneously. The objective is to analyse the relationship between the country-specific effect and the combined impact of the four gender equality variables when considered together.

The model is the following.

$$\alpha_k = c + \sum_{j=1}^4 \beta_j X_{jk} + e_k \quad (3)$$

where:

- α_k remains the dependent variable, representing the country-specific effect for country k .
- c is the constant term common across all countries, when all four gender equality variables are considered simultaneously.
- $\sum_{j=1}^4 \beta_j$ denotes the combined effect of all four gender equality variables, representing their collective influence on the country-specific effect.
- X_{jk} represents the value of each gender equality variable for each country.
- e_k is the error term for the multiple regression in country k .

Results

The results presented in Table 4.2 demonstrate that these country-specific effects exhibit varying levels of significance. Specifically, the gender wage gap and views on being a housewife are significant at the 1% level, while men's unpaid work time is significant at the 5% level, and the share of managers at the 10% level when examined individually. Standardised coefficients reveal that the gender wage gap has the most pronounced effect.

However, when all four variables are examined simultaneously, issues of collinearity arise, and the significant variables are narrowed down to the wage gap and views on being a housewife. This implies that, when adjusting for the aforementioned individual characteristics and parental factors, the reduction in the gender wage gap within a country and less traditional views on being a housewife have the most substantial effect on elevating the occupational expectations of girls

compared to the average expectations of boys. To phrase it differently, it is plausible that the gender inequality situation in Japan, specifically the considerable gender wage gap, along with more positive views on being a housewife, play pivotal roles in diminishing the occupational expectations of girls.

Table 4.2: Results of OLS with Country Specific Effects and Gender Equality Landscape Variables

Variables		Standardised Coefs	P> t	Countries	Adjusted R2
Individually	Wage	0.533	0.002	36	0.284
	Managers	0.396	0.090	36	0.157
	Unpaid Time	0.461	0.044	35	0.213
	Housewife	0.523	0.009	33	0.274
Combined	Wage	0.381	0.010	32	0.489
	Managers	0.154	0.315		
	UnpaidWork	0.127	0.341		
	Housewife	0.285	0.050		

Source: OECD (2019b), OECD.Stat, ISSP (2014), Haerper *et al.* (2022).

Multilevel Regression Analysis

Model and Method

Expanding upon the OLS model that examined the determinants of girls' ISEI compared to boys, a multilevel regression analysis is conducted to further explore the factors influencing the ISEI ratio of girls to the average ISEI of boys within each country. Through this multilevel regression analysis, the aim is to investigate the relationship between individual-level variables and the dependent variable, while also considering the contextual influence of country-level factors. This methodology enables the examination of how factors at both the individual and country levels contribute to variations in the dependent variable, offering insights into the complex interplay between individual characteristics and broader social contexts across different countries.

The independent variables considered in this analysis include individual-level factors such as the plan to attend university, reading scores, mother's ISEI, and father's ISEI, alongside the country-level factor of the gender wage gap. The variable for maths scores was intentionally excluded from the analysis due to its statistically insignificant impact. The decision to focus on the gender wage gap for the country-level factor stems from the statistical significance observed when including all four variables. Collinearity issues with the other three variables led to their exclusion.

The model is as follows:

$$ISEIRatio_{ki} = \gamma_0 + \sum_{j=1}^4 \beta_j X_{jki} + \gamma Z_k + u_k + e_{ki} \quad (4)$$

where:

- $ISEIRatio_{ki}$ is the dependent variable for female individual i , as compared with the average of boys' ISEI score in country k . This represents the score of each girl's ISEI compared to the average ISEI score of boys within the same country.
- γ_0 represents the intercept or constant term, serving as a baseline value for the ISEI ratio when all predictor variables are set to zero.

- The term $\sum_{j=1}^4 \beta_j X_{jki}$ captures the combined influence of the four individual-level variables (plan to attend university, reading scores, mother's ISEI, and father's ISEI), represented by X_{jki} , where j signifies each specific variable. This term explains the influence on the ISEI ratio for an individual i within country k .
- γZ_k represents the coefficient γ , associated with the country-level variable, denoted as Z , quantifying how changes in the gender wage gap influence the ISEI ratio of girls at the country level.
- u_k is the random effect for country k , capturing unobservable variations specific at the country level that are not accounted for by the explanatory variables.
- e_{ki} is the error term for individual i in country k , capturing unobserved or random variability not explained by the predictors.

Results

The results presented in Table 4.3 indicate that the expectation to attend university, reading scores, and father's ISEI are significant at the 1% level, while the mother's ISEI is significant at the 10% level. The gender wage gap is also found to be significant at the 10% level.

Table 4.3 Results of Multilevel Regression Analyses

Model				
<i>Observations</i>	<i>Countries</i>	<i>Minimum/ country</i>	<i>Maximum/ country</i>	<i>Wald chi2(5)</i>
86,059	36	1,085	12,150	107
Individual-level Coefficients				
<i>Variable</i>	<i>Coefficient</i>	<i>Standard Error</i>	<i>z</i>	<i>P> z </i>
Expect University	0.1508	0.021	7.26	0.000
Reading Score	0.0005	0.000	5.27	0.000
Mother's ISEI	0.0003	0.000	1.82	0.069
Father's ISEI	0.0006	0.000	3.08	0.002
Gender Wage Gap	0.0049	0.0026	1.8900	0.0590
Constant	0.1879	0.2150	0.8700	0.3820
Random-Effects Parameters				
<i>Levels</i>	<i>Variation</i>	<i>Standard Error</i>	<i>[95% Conf. Interval]</i>	
Country-level	0.041	0.013	0.022	0.078
Individual-level	0.089	0.010	0.072	0.111
Residual Interclass Correlation				
<i>Level</i>	<i>ICC</i>	<i>Standard Error</i>	<i>[95% Conf. Interval]</i>	
Country-level	0.315	0.084	0.176	0.497

Source: OECD (2019b), OECD.Stat

Furthermore, the Intraclass Correlation Coefficient of 0.315⁷ implies that around 31.5% of the total variability in the dependent variable can be attributed to differences between countries⁸. This substantial percentage underscores the importance of country-level factors in shaping individual outcomes, revealing that the country to which the student belongs significantly contributes to variations in the ISEI ratio.

It is noteworthy that the significance of the gender wage gap is borderline, but this is acceptable given the exploratory nature of the study. Further investigation of this topic will be undertaken through a qualitative study involving interviews with female university students. The approach aims to probe deeper into female occupational expectations and the contributing factors, providing richer insights into the interplay between individual and societal influences.

Summary and Discussion

Japan is the only OECD country where the average ISEI score of girls' expected occupations is notably lower than that of boys, with the exception of Korea, where the difference is not significant. In this chapter, data for all countries were aggregated to conduct an OLS regression to examine whether the plan to go to university, higher maths and reading scores, as well as higher ISEI scores of parents' occupations contributed to the higher ISEI score of a girl's expected occupation compared to the boys of the same country. This analysis, including the examination with country-specific effects, aimed to uncover nuanced relationships between these factors. The findings indicated that the significance of each factor was maintained when controlling for the effect of other variables.

Upon comparing the country-specific effects, the results showed that, among 36 countries, girls in Japan still had the lowest average ISEI score ratio against that of boys from the same country. This indicated that other factors could be dampening the occupational expectations of Japanese girls, apart from the lower proportion of girls planning go to university and maths scores. To explore this, the gender equality landscape factors related to the labour market and gender norms were examined in this chapter. It was discovered that on all four indicators of the gender wage gap, the share of female managers, unpaid work time by men, and opinions on being a housewife, Japan was either the most or second most conservative country. Again, OLS regressions showed relationships between these indicators and ISEI score ratios, particularly the gender wage gap, and views on being a housewife.

These results suggest that, even after controlling for micro/meso factors, Japanese females experience discouragement in fostering high occupational expectations, influenced by factors such as a significant wage gap, a lack of role models, and societal expectations reinforcing household responsibilities. Notably, a multilevel analysis revealed that around 31.5% of the variations in the girls' occupational expectations relative to boys can be attributed to country-level factors such as the wage gap. The findings align with previous studies indicating the absence of female role models for girls in Japan and other countries, where societal expectations often steer them towards family responsibilities in adulthood (Maeda 2017; Nemoto 2008, 2013; Ouchi

⁷ Without the inclusion of specific variables, the Intraclass Correlation Coefficient was found to be 0.25, indicating that approximately 25% of the total variability in the dependent variable is attributed to differences among countries. The above increase to 31.5% underscores the substantial impact of the added variables in capturing and explaining additional sources of variability in the ISEI ratio.

⁸ In this multilevel regression analysis, no specific country among the 36 countries served as a reference. Consequently, the coefficients for the country-level variables are interpreted in relation to the overall mean or average effect across all countries. This approach provides a comprehensive understanding of how each country's characteristics contribute to the observed outcomes without privileging any single country as a reference point.

2012; Smirles *et al.* 2020). They also underscore a perpetuating cycle, termed an 'echo effect,' where current practices impact future generations (Adachi 2018; Zhou 2013).

In contrast, a virtuous cycle may be unfolding in other countries where the wage gap is small and role models of women actively pursuing careers are abundant. In such countries, girls are more likely to envision themselves pursuing challenging or prestigious occupations instead of becoming housewives. When examining gender equality indicators, many Former Socialist and Nordic countries exhibit favourable conditions. For instance, Hungary, Lithuania, Poland, Slovenia, and Latvia have smaller wage gaps, and Latvia, Iceland, and Poland have a higher proportion of female managers. Denmark, Sweden, Norway, and Slovenia show greater participation of men in unpaid work, and Norway, Denmark, Sweden, and the Czech Republic exhibit progressive attitudes regarding being a housewife.

As mentioned in Chapter 2, this study is limited to samples of students who indicated their expected occupations and were able to specify their parents' education and occupations. Therefore, there is a possibility that the sample is biased. However, the purpose of this chapter is to compare like-with-like students from Japan against those from other OECD countries, without claiming that they are representative of all 15-year-olds. Another limitation is that the sample size of 32 to 36 countries with comparable gender equality data may not be sufficient to confidently generalise the relationships with the ISEI score ratios.

Therefore, future research could increase the number of sample countries by including emerging economies that have reliable and relevant national-level data on gender equality. In addition, since the effects of peers and teachers from the micro/meso systems are not examined due to lack of appropriate data in the PISA survey, these elements could also be explored. Furthermore, a large-scale longitudinal study aimed at demonstrating the relationships between expected occupations and actual occupational achievements across many countries would be highly valuable. If significant correlations are identified, a compelling case can be made to encourage females to set high aspirations for their prospective careers.

In conclusion, Japan needs to recognise the significant underutilisation of half its population. As the maths test results show, Japanese girls score high among girls and boys of many OECD countries. Yet, this competence is not fully utilised in the economy. Japan should take more measures to reduce gender inequality in the labour market and household responsibilities so that young girls feel confident about pursuing challenging occupations in the future. In essence, it is crucial for the country to tap into more of its human capital, as seen in other countries that are better at harnessing the capabilities of women.

Chapter 5: Comparison between Japan and the UK: Universities and Labour Policies

Following quantitative international comparisons of factors affecting occupational expectations in Chapters 3 and 4, Chapter 6 aims to verify some of the findings by conducting a qualitative study comparing Japan with another country, the UK. It entails in-depth interviews of female university students studying in the two countries. By contrasting real-life voices and perspectives, the objective is to validate whether the aforementioned theories and differences in identified factors can account for the lower occupational expectations of Japanese females.

In this context, this chapter first explains the rationale for selecting the UK. It then provides background information on universities and labour issues of the country, highlighting differences with Japan. These descriptions are necessary to understand the contrasting situations faced by young females in the two countries.

Rationale for Comparing with the UK

The UK is chosen for comparison due to several reasons. Firstly, it is one of the G7 countries, just like Japan. This implies similarities in both being economic powerhouses, exerting global influence in trade, investment, environment, security, health, foreign policy, and so on. Moreover, G7 countries also frequently engage in comparisons and co-ordination on gender equality issues, which is relevant in the context of occupational expectations. For instance, with the G7 Dashboard on Gender Gaps, it is possible to examine the differences in the state of gender equality between the two countries, as shown in Table 5.1.

The second reason is due to some similarities between the UK and Japan regarding female labour, and some differences, particularly where the UK is more advanced. The similarities include gender differences in PISA maths scores and the share of women in part-time work. Where the UK is more advanced is in the share of women among STEM graduates, as well as gender differences in labour force participation rates, the wage gap, and unpaid work time. The only aspect where Japan is more favourable for women's employment is the lower childcare facility cost as a share of average wages.

**Table 5.1: Selected Indicators from
the G7 Dashboard on Gender Gaps for Japan and the UK**

	PISA maths score difference (boys vs girls)	Share of women among STEM graduates	Labour force participation rate (men minus women)	Share of women in all part-time workers	Gender wage gap (difference)	Gap in unpaid work time (women minus men)	Childcare facility cost as % of wage
Japan	532 vs 522	17%	87% vs 73% (12%)	73%	22%	2hr 41 min	11%
UK	508 vs 496	33%	82% vs 75%(7%)	75%	14%	1hr 48 min	27%

Source: OECD 2023a, 2023b

Third, the UK is an Anglo-Saxon country characterised as a Liberal Welfare regime, according to Esping-Andersen's classification (1990, 1999). However, some scholars consider the country to be more on the traditional side of the regime grouping. While Esping-Andersen does not clearly

categorise Japan, he and other scholars observe that the country has the characteristics of both Liberal and Conservative welfare states (Buhr & Stoy 2015; Esping-Andersen 1997; Hong 2008).

Lastly, even though the UK is no longer a member of the European Union (EU), it has an extensive history of leading efforts in Europe to shape and promote gender issues. Therefore, its longstanding legacy as an influential player within the region continues, which also attracts students from neighbouring countries to study at its universities. Thus, this melting pot of cultures could provide valuable lessons learned from different perspectives when examining the various influences that shape the occupational expectations of female university students.

Thus, the UK could provide some lessons learned that might be relevant in elevating occupational expectations of young females in Japan. In other words, a comparative analysis between the UK and Japan could be meaningful due to their shared traits as well as the more advanced situation of the UK in women's labour issues. This comparison may be more effective than benchmarking against countries with much higher gender equality standards – i.e., those in the Social Democrat regime like the Scandinavian countries – as the labour market and welfare systems are too different from Japan. Alternatively, comparison with a country resembling Japan's low gender equality situation could also be limited in being a model.

Information on Universities and University Students

To that end, 48 female students enrolled in various universities in the UK and Japan were interviewed, as detailed in Chapter 6. The chapter specifically conducts a comparative analysis of the occupational expectations of these students and explores the factors influencing them. To contextualise the findings from these interviews, the following section provides background information concerning universities, with a summary in Table 5.2.

Table 5.2 Comparison of University Education between Japan and the UK

Country	# of universities	Annual tuition	% proceeding to university	Girl/Boy Ratio in Enrolment	Age to decide university major	Bachelor's Degree	Master's Degree	% receiving student loans
Japan	773	¥500,000 to ¥1.6 million	53% (girls) 60% (boys)	85%	17-18 years old	4 years	2 years	Around half
UK	160-170	£9,250 (¥1.7 million)	53% (girls) 40% (boys) (England)	127%	14-16 years old	3 years	1 year	More than 68%

Source: OECD, MEXT 2022a & 2022b, UK Department for Education 2022

In Japan, the university landscape comprises approximately 773 institutions (MEXT 2021b), with 95 (12%) being national, 61 (8%) regional public, and 617 (80%) private. Concerning tuition, national universities generally charge between ¥500,000 and ¥800,000, regional public universities between ¥500,000 and ¥900,000, and private universities between ¥900,000 and ¥1.6 million per year (MEXT 2022b, n.d.). According to the Japan Student Services Organization (JASSO), approximately half of the four-year university students in Japan resort to their scholarships and others' to finance education and living costs (JASSO 2022). While challenges in loan repayments are becoming a social issue (Armstrong *et al.* 2019; Ouchi 2015), none of the interviewees described in Chapter 6 expressed significant concern regarding this matter for the moment.

In the UK, around 150 universities exist (Higher Education Statistics Agency 2023). This suggests that Japan has approximately three times the number of universities per person under 25 years

old compared to the UK (author's calculation based on Office for National Statistics [ONS] 2023a). Most UK universities are publicly funded, although technically not government owned. The tuition of a bachelor's degree for British students is generally uniform at £9,250 a year (approximately ¥1.7 million) in 2023 (Department for Education 2023) and variable fees for international students, depending on the programme.

According to the latest government report, 94-96% of eligible students have been taking loans since 2015/2016 (Bolton 2023). Since repayments start when borrowers earn above £27,300 annually, and any remaining debt is forgiven after 30 years, concerns have risen regarding potential work disincentives and the fiscal burden posed by outstanding loans. However, Britton & Gruber (2020) find that the UK's loan system, including income-contingent loans, has not reduced labour supply, mitigating concerns about decreased loan payments and tax receipts.

At the same time, in recent years, tuition fees in the UK have substantially increased compared to the past, making them notably higher than the fees in most other European countries. This surge in tuition costs has been further amplified by the consequences of Brexit, resulting in EU students now having to pay fees on par with those charged to non-EU international students. Despite these increased costs, some of the European interviewees described in Chapter 6 have still chosen to study in the UK due to their prior attendance at international schools where English was the primary language and their desire to continue their English-language education.

Given this situation, one could infer that the European students interviewed predominantly originate from affluent households capable of readily meeting the elevated tuition expenses. Consequently, it may be conjectured that the sample exhibits an inclination towards individuals with higher economic standing in comparison to their counterparts in Japan. However, upon examining parental education levels and occupational backgrounds, it becomes apparent that this assumption may not necessarily hold true (refer to Chapter 6). Conversely, while 22% of undergraduates in the UK are international students, the top four nationalities are China, India, Nigeria, and USA (Universities UK 2022) — countries with large populations. As none of the interviewees in the UK represents these nationalities, it is important to acknowledge the potential bias towards European students in the sample.

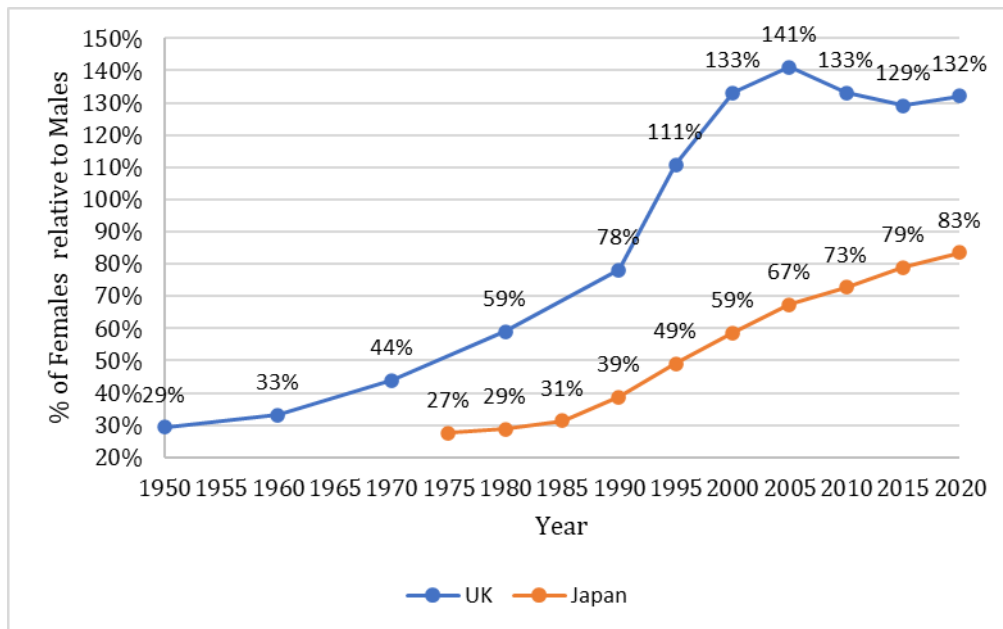
In 2022, 53% of high school graduating girls and 60% of boys in Japan proceeded to attend four-year universities (MEXT 2022a), reflecting increases from 44% of girls and 56% of boys in 2009. Similarly, in England, 54% of girls and 40% of boys proceeded to attend universities in 2022, demonstrating growth from 38% of girls and 30% of boys in 2009/10 (Department for Education 2022). However, when examining the gender ratio, fewer females compared to males were enrolled at a ratio of 83% in Japan, while in the UK, more females were enrolled, surpassing males at 132% in 2020 (Higher Education Statistics Agency 2023; MEXT 2021b).

Figure 5.1 illustrates the evolution of female enrolment in bachelor's degree programmes as a proportion of male enrolment between Japan and the UK. It shows that Japan's female enrolment of 27% relative to males in 1975 was akin to the UK's level in 1950. Although the proportion has consistently increased in Japan, it has yet to surpass the number of males. In contrast, more girls began enrolling than boys in the early 1990s in the UK (Vincent-Lancrin 2008), coinciding with a period of significant university education expansion. This suggests that the UK is at least three decades ahead of Japan in terms of female enrolment in universities. Notably, Japan stands out among a few OECD countries where fewer girls pursue bachelor's degrees compared to boys.

At the same time, comparing occupational expectations of university students between the two countries can raise issues because the UK encourages students to select their majors for university earlier than in Japan. In the UK, when students are 14 to 16 years old, they are required

to select three subjects to study if they plan to go to university. At the end of two years of studying these subjects, they take the A-levels exams, which become important in applying to university departments that are more specialised than those in Japan (Anders *et al.* 2018). For example, students apply to departments such as accounting, electrical engineering, biochemistry, zoology, art history, or economics, instead of broader departments in Japan such as general engineering, science, political science and economics, literature, and so on.

Figure 5.1 Evolution of Gender Ratios in Undergraduate Enrolment



Source: Higher Education Statistics Agency for UK's data from 1995 to 2020. They encompass all undergraduate full-time and part-time students, including both UK domestic and international students. For the period 1950 to 1990, data are from ONS, cited in Bolton (2012). They include full-time first degree students only. Japan's data for the years 1975 to 2020 is sourced from the Basic School Survey of MEXT.

Furthermore, except for Scotland, most bachelor's programmes in the UK are three years and master's programmes are typically one year (Artherton *et al.* 2023). Thus, students in the UK begin to focus on their chosen majors earlier and concentrate more intensively throughout their three-year undergraduate or one-year master's programme compared to students in Japan with a bachelor's degree. This has implications for occupational expectations, as students in the UK will need to consider potential occupations much earlier in their course of study than their Japanese counterparts.

With this understanding, Table 5.3 presents the top 10 occupations expected by high school girls in the UK and Japan from PISA 2018, specifically those planning to attend university. Due to space constraints, the remaining 150-plus occupations specified by British girls and 100-plus occupations specified by Japanese girls are abbreviated. Nevertheless, the top 10 occupations for the UK (n=2,503) reveal that the most popular occupation is to become a lawyer, accounting for 12% of the total sample. Additionally, six other occupations in the top 10, all with ISEI scores above 80, include a generalist medical practitioner, psychologist, biologist, designer, veterinarian, and dentist. Teachers (teaching professional and primary school teachers), both with ISEI score of 76, amount to 7%. The weighted average of the ISEI scores for these top 10 jobs is 82, surpassing the average ISEI score of 73 for British boys planning to go to university, although this information is not presented here.

For Japan (n=1,129), the most popular occupation is, again, an administrative assistant (ISEI 43). However, contrary to the top 10 expected occupations of all high school girls shown in Table 3.2 in Chapter 3, this list includes occupations like medical doctors and secondary school teachers, with ISEI scores in the 80s, as opposed to occupations such as hairdressers and shopkeepers, which have ISEI scores in the 30s. Furthermore, if teaching professional and secondary school teacher are combined, the percentage of those expecting to become a teacher increases to 8%, compared to 4% in the general sample. The rest are the same, with becoming a housewife ranking eighth, despite the fact that the sample consists of those intending to pursue university education, and most occupational classifications do not categorise it as a formal occupation. The weighted average of the ISEI scores for the top 10 jobs is 59, which is somewhat higher than 51 among all high school girls, but significantly lower than the counterpart girls in the UK.

Table 5.3: Top 10 expected occupations of high school girls who plan to go to university

UK				Japan			
#	Occupation	ISEI	%	#	Occupation	ISEI	%
1	Lawyer	87	12%	1	General office clerk	43	10%
2	Medical doctor	89	9%	2	Nursing professional	69	9%
3	Psychologist	86	7%	3	Office supervisor	62	8%
4	Teaching professional	76	5%	4	Teaching professional	76	6%
5	Biologist	80	4%	5	Childcare worker	25	6%
6	Nursing professional	69	3%	6	Pharmacist	81	4%
7	Dentist	69	3%	7	Medical doctor	89	3%
8	Veterinarian	84	2%	8	Housewife	17	3%
9	Product and garment designer	80	2%	9	Nutritionist	65	2%
10	Primary school teacher	76	2%	10	Secondary school teacher	82	2%
	Weighted average	82	48%		Weighted average	59	54%

Source: OECD (2019b)

The different approaches to specialisation in universities between the UK and Japan reflect the specific demands of their respective labour market that students are expected to prepare for. Despite these distinctions, some of the UK policy initiatives to address gender equality could provide valuable insights and strategies to foster higher occupational expectations among young Japanese females. While these initiatives range from career guidance, promotion of role models, addressing bias and stereotypes, mentorship and networking, flexible work, to gender pay gap reporting, this research focuses on one area in this Chapter – flexible work – drawn from findings from the interviews explained in Chapter 6.

Labour Market Characteristics

A major component of this chapter is a comparative analysis of WLB systems in Japan and the UK. This stems from a key concern voiced by interviewees in Japan, as discussed in Chapter 6, highlighting the challenge of advancing their careers while caring for children. Therefore, it is crucial to explore how women manage their careers during this life stage, as young females often shape their future aspirations based on the experiences of others in similar situations. The focus of the examination should particularly emphasise the capacity to sustain WLB well beyond the conventional one or two years of maternity or parental leave (Matsui 2019; Nishimura 2014).

Furthermore, understanding the structure of the labour market in Japan and the UK is essential for a meaningful comparison of their WLB policies, as the characteristics of each country's employment landscape can significantly influence policy effectiveness. Examining the gender distribution in various occupations is particularly crucial, revealing disparities that could result in different impacts

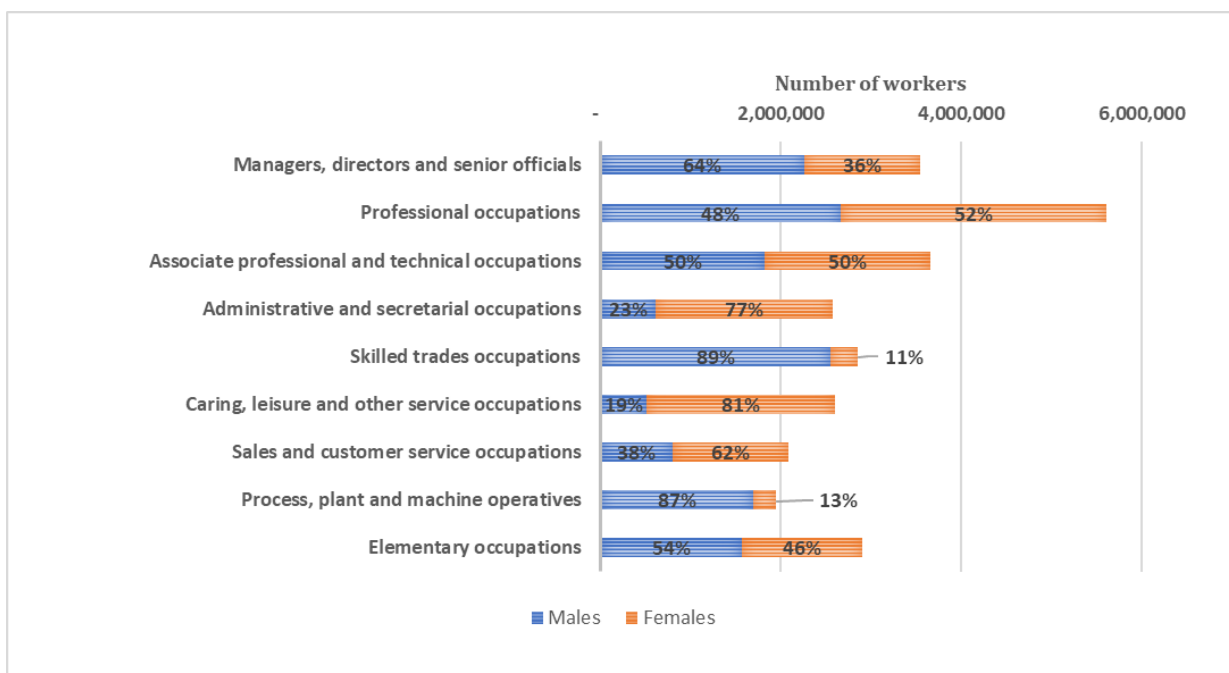
of WLB policies on individuals based on gender. This understanding enables a more targeted approach in designing policies to enhance WLB in the respective countries.

Gender Distribution of Occupational Categories

In this context, Figure 5.2 illustrates the occupational composition of workers in the UK, specifically England and Wales, disaggregated by gender proportions based on the UK Census 2021. The figure highlights a significant presence of females in caring, leisure, and other service occupations (such as care givers, hairdressers, and housekeepers), constituting 81% (ONS 2023b). Following closely are administrative and secretarial occupations (including government administrators, office managers, and secretaries), where females make up 77%. Additionally, females also represent a substantial proportion in sales and customer service occupations (like sales assistants and cashiers), accounting for 62%.

Conversely, males dominate in skilled trades (such as farmers, vehicle mechanics, and construction workers) and process occupations (including machine operators and vehicle drivers), accounting for 89% and 87%, respectively, followed by management occupations (such as corporate managers and elected officials) at 64%. Occupations that demonstrate a relatively balanced gender distribution include professional occupations (such as researchers, doctors, nurses, lawyers, and architects), associate professional and technical occupations (including IT technicians, paramedics, and community workers), and elementary occupations (such as farm labourers, cleaners, and factory workers).

Figure 5.2 Gender Distribution of Workers in Occupational Categories in the UK

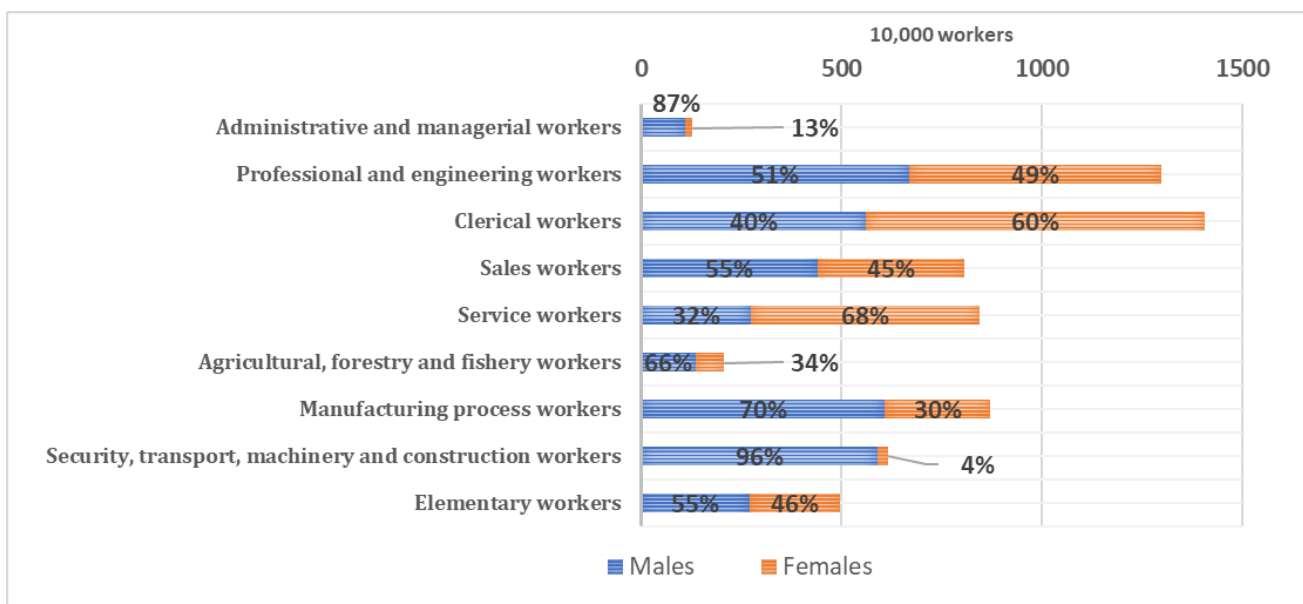


Source: UK Census 2021 (ONS 2023b)

In the case of Japan, Figure 5.3 illustrates the occupational composition of workers, broken down by gender proportions based on the Labour Force Survey 2023. The graph highlights a substantial representation of females in service occupations (such as housekeepers, elderly care workers, associate nurses, hairdressers, cooks, and building janitors), comprising 68% (MIC 2009). Following closely are clerical workers (including human resource workers, administrative assistants, receptionists, sales agents, and data entry workers) at 60%.

Conversely, males are prevalent in security, transport, machinery, and construction occupations, constituting 96%. This is followed by administrative and managerial workers (such as politicians, organisational heads, and managers) at 87%, manufacturing process workers (for metal, chemical, food, electric, textile, clothing products, etc.) at 70%, and agricultural, forestry, and fishery workers at 66%. Occupations that demonstrate a relatively balanced gender distribution include professional and engineering workers (including researchers, engineers, engineering technicians, medical doctors, nurses, nurse associates, legal workers, teachers, and artists), sales workers (including shop owners, sales workers, real estate agents, financial agents, and telecommunication marketing agents), and elementary occupations (such as deliverers and cleaners).

Figure 5.3 Gender distribution of Workers in Occupational Categories in Japan



Source: Labour Force Survey 2023 (MIC 2023a)

Comparing the UK and Japan reveals both similarities and differences in occupational patterns. While classifications are not identical, both countries exhibit a substantial female presence in service-related occupations, with 81% in the UK and 68% in Japan. Administrative and clerical roles also share commonality, with 77% female representation in the UK and 60% in Japan. Moreover, both nations display a significant male dominance in comparable occupational categories, such as skilled trades and machinery-related occupations, constituting 89% and 87%, respectively, in the UK, and security, transport, machinery, and construction occupations at 96% in Japan. Additionally, a noticeable gender disparity in management and administrative roles is evident in both countries, with males representing 64% in the UK and a more pronounced 87% in Japan.

An issue arises in the occupational classification of Japan, particularly in combining the occupations of professionals and associate professionals (Nishizawa 2018). In the UK, these categories are distinct, with professional occupations typically having higher ISEI scores than associate professionals. However, in Japan, the amalgamation of these categories potentially obscures a nuanced gender distribution. While both professional occupations and associate professionals in the UK exhibit gender balance, the combined category in Japan conceals variations. Based on the analysis of the SSM 2005 data, Yamaguchi (2019b) disaggregates professional occupations into Type 1 and 2. Type 1 includes occupations with high SES, such as college professors, medical doctors, dentists, and so on, while Type 2 encompasses the rest, with lower SES, including most other human service professions. As a result, calculations indicate that the gender ratio for Type 1 is 74% males to 26% females, while for Type 2, it is 8% males to 92% females.

Addressing this gendered occupational segregation in Japan is crucial for the discussion on occupational expectations. The observable gender balance in the UK in occupations with high ISEI scores could serve as inspiration for educated young females aspiring to similar roles. Notably, beyond the gender-balanced distribution of professional occupations, the female share of managers in the UK is 42% among 25-34-year-olds, surpassing the overall figure of 36%, offering greater hope for young women. Conversely, alongside the limited representation of females in high-SES professional occupations discussed above, the share of female managers among 25-34-year-olds in Japan is 25%. While this surpasses the 13% across all age groups, it still remains notably lower than Japanese males and the corresponding figure in the UK. Consequently, the scarcity of female role models in demanding professions in Japan may erode the occupational expectations of university-educated young Japanese women.

Non-Standard Work in the UK

This section conducts a comparative analysis of WLB policies in Japan and the UK, with attention to flexible work. The focus arises from the disparities between the interviewees from the two countries regarding their concerns about WLB in their future careers, potentially influencing their occupational expectations. To contextualise this analysis, it is essential to first offer a brief overview of the UK labour market, concerning standard and nonstandard workers. Grasping these characteristics is crucial for understanding the differences in the implications of flexible work between the two countries. Therefore, the following description outlines the contemporary situation of the UK labour market, as it pertains to this study. For additional information, Box 5.1 provides a historical context regarding the state of nonstandard work approximately two decades ago in the early 2000s.

To understand the personnel management landscape in the UK, the depiction by Sano (2018) can be useful. He explains that the workforce in the UK is generally divided into three primary groups: 1) the core group, comprising regular full-time employees responsible for pivotal tasks and high-level discretionary responsibilities crucial to the company; 2) the peripheral group, encompassing quasi-regular full-time employees, fixed-term employees, or part-time workers engaged in non-company-specific skills and routine duties with limited discretion; and 3) the external group, consisting of subcontracted and dispatched workers.

Within these workforce categories, the core group demands 'functional flexibility', implying that companies can swiftly and seamlessly reassign these employees among various activities and roles in the short or medium term. In contrast, the peripheral and external groups require 'numerical flexibility', allowing companies to respond promptly, affordably, and effortlessly to short-term fluctuations in labour demand by hiring and laying off workers or transitioning them to fixed-term contracts. The availability of 'numerical flexibility' contributes to job security for the core group, who are expected to demonstrate a high level of commitment to the company, facilitating their long-term development and utilisation of company-specific skills. Consequently, job security and promotion prospects appear to differ significantly between the core and peripheral groups, akin to the labour market model in Japan, described in Chapter 1.

However, Sano points out that there is limited evidence supporting this as a typical model in the UK. One primary reason is the absence of comprehensive organisational strategies of this nature, coupled with the lack of robust human resources departments to enforce personnel planning based on cost comparisons among different employment forms. Instead, decentralised decision-making prevails, responding to optimal business needs on a case-by-case basis.

Furthermore, a significant difference between the UK and Japan is found in the composition of nonstandard employment groups. In the UK, these groups are not homogeneously comprised of unskilled, low-wage, and unstable workers; instead, they encompass various positions and labour typologies, ranging from unskilled fixed-term employees to highly skilled professionals. Sano acknowledges that in female-dominated occupations such as secretaries, salespersons, cleaners, and nurses, many women in the UK are offered nonstandard contracts to accommodate family

responsibilities. However, he also notes that many women in these occupations also have full-time standard contracts; and moreover, the fundamental principle of equal pay for equal work is consistently applied. In essence, fixed term and permanent standard contract employees generally receive identical wage rates, bonuses, and social security benefits⁹.

Box 5.1 Nonstandard Work in the UK in the Early 2000s

Fagan & Ward (2003) explain that nonstandard employment in the UK had been a longstanding practice, but it gained increased prominence in the early 2000s. This shift was linked to the country's transition towards a "liberal" welfare regime, as categorised by Esping-Andersen (1990). As a result, labour market regulations were relaxed, reducing employment rights and weakening the influence of trade unions. Simultaneously, labour market institutions aligned more closely with liberal economic principles. The rise of nonstandard employment was primarily driven by employers seeking greater workforce flexibility, with the aim of reducing labour costs to stay competitive globally and address uncertainties in product markets.

Nonstandard employment, predominantly found in a limited range of low-status, low-paid service positions, encompassed several distinct forms. Part-time work, typically involving fewer than 30 hours of work per week, was commonly undertaken by women with family responsibilities. These roles were particularly prevalent in service sectors like hotels, catering, and retail, where formal human capital entry requirements were minimal or non-existent. For employers, this represented a cost-effective solution, resulting in lower hourly wages, fewer fringe benefits, and reduced social security costs (Matsui 2016). Furthermore, part-time work enabled businesses to extend their operating hours, manage workload fluctuations, and enhance their recruitment and staff retention capabilities. Temporary employment featured a variety of arrangements, including fixed-term contracts and temporary agency work. The prevalence of temporary contracts increased within the UK, with workers often transitioning from temporary employment to longer-term commitments. Temporary agency workers played a pivotal role in this context, being engaged on an 'as-needed' basis.

Nonstandard work had a lasting impact on the UK labour market. Female employment in the UK saw growth, often through part-time work, as it allowed mothers to balance work with family responsibilities. They also became significant routes into employment, with the majority of new job entries in the late 1990s involving part-time or fixed-term contracts. For example, in 1997, 40% of women were in part-time employment compared to 14% of men, and 70% of new job entries were through fixed-term contracts.

Meanwhile, the EU was playing a substantial role in shaping labour market regulations by introducing directives to regulate nonstandard employment. For example, the Working Time Directive of 1993 established limits on weekly working hours, capping them at 48 hours. Similarly, the 1997 Equal Treatment for Part-Time Workers Directive and the 1999 Fixed-Term Work Directive aimed to ensure equal benefits and treatment for part-time and fixed-term workers. The prevalence of these forms of employment differed within the EU based on the regulatory environment, with the UK offering fewer employment protections compared to some EU counterparts.

In addition, part-time employment is not inherently considered peripheral labour -- it can be utilised until employer confidence grows, potentially leading to the conversion of part-time employees into more permanent roles (Fagan & Ward 2003). Additionally, Sano finds that, as the required skill or expertise level of a post increases, the tendency of using part-time contracts rises. Thus, the distinction in job roles between standard full-time employment and nonstandard employment within organisations is less rigid, allowing individuals, particularly women, the flexibility to switch between different contractual types to balance work and family life.

On the other hand, the OECD's economic survey of the UK (2022b) points out that, despite women's high education levels in the UK, their skills go underutilised in the labour market, leading to

⁹ Except when earnings were lower than £61 per week in 1996-7 (HM Revenue & Customs 2014), which is equivalent to around ¥1.34 million per year in current rates.

diminished productivity and growth. Roughly one-third of women work part-time, a proportion approximately three times higher than that of men, primarily due to their caregiving responsibilities. Notably, mothers undergo a substantial and long-lasting reduction in working hours following the birth of their first child. Even a decade after resuming work, their wage levels do not rebound. The report also highlights that more than half of mothers report altering their employment situations for childcare reasons, a contrast to about a quarter of fathers. The OECD attributes this phenomenon to ingrained gender norms, limited parental leave entitlements, and the scarcity of affordable, high-quality childcare, collectively penalising motherhood.

Thus, both Japan and the UK share similarities in that a significant number of women engage in part-time work to balance their jobs and childcare responsibilities. However, Japanese women face major challenges compared to those in the UK. In Japan, once women leave their full-time regular positions, obtaining another one and advancing in their careers becomes challenging. The UK presents a somewhat different scenario, as working part-time often results in a pro-rata reduction in salary and benefits, but they may still retain the possibility of career progression. These differences can be crucial factors influencing the occupational expectations of young women in both countries.

Overview of Work-Life Balance Policies

Chapter 1 explained that working women in Japan who seek WLB often find themselves in non-regular positions, which are low paid with minimal career prospects. On the other hand, those in regular positions aspiring to build their careers often work long hours, which can pose challenges to achieving WLB. Therefore, the key question is how women in regular positions are maintaining WLB by leveraging the flexible work systems introduced by the government in recent years.

In this context, within the UK, the government's first major policy document on WLB has reported that 92% of mothers on maternity leave considered flexible work to be either essential or important in facilitating their return to work (Department of Trade and Industry 2003). This statistic highlights the significance of flexibility in work arrangements for mothers, underscoring the relevance of comparing these systems between Japan and the UK.

Furthermore, while the precise impact of flexible work on young women's occupational choices remains uncertain, it is presumed to exert some influence, particularly for Japanese females. For instance, although not directly related to specific occupations, a survey conducted by Yokota (2016) indicates that the prospects of having flexible work arrangements or the option to avoid significant overtime hours play a pivotal role in shaping the aspiration of female students at a national university to pursue management roles in the future.

In contrast with the interviewees in Japan, those in the UK did not express excessive unease regarding WLB. Instead, they demonstrated more apprehension regarding their promotional prospects. For interviewees in Japan, promotion was a secondary consideration vis-à-vis their primary concern of being able to continue their careers. This corroborates the findings by Yokoyama (2020), which suggest that women who consider household chores and childcare to be a burden often choose to forgo regular full-time employment before even contemplating on prospects such as promotions.

Therefore, a comparison of flexible work systems could provide insights into the realisation of WLB by female workers with children in Japan and the UK. Specifically, it is crucial to look beyond policy frameworks and delve into the actual use of entitlements. This examination is crucial because, in Japan, deficiencies often stem not from the policies themselves but rather from the application of labour standards and benefits (Ikemoto 2003; Nagase 2017).

Flexible Work Policies

Japan

The challenge of WLB for parents continues long after the maternity or parental leave period, spanning several years. In other words, achieving success in one's chosen occupation hinges on the ability to effectively balance work and family well beyond the infancy years, covering the entirety of a child's elementary school education and potentially further. With this understanding, Japan has enacted and amended several laws aimed at empowering parents to adapt their work hours to accommodate the care of their children.

In this research, the nonstandard working style under consideration is collectively referred to as 'flexible work,' encompassing reduced work hours, staggered work hours, and flexible scheduling hereafter referred to as 'flexi time.' The study by Nagase (2017) establishes the effectiveness of reduced-work hour systems in facilitating women's continued employment after childbirth. Specifically, it shows that the utilisation of reduced work hours among married women in regular employment with a child under three years old increased from 38%-58% in 2009 to 45%-65% in 2015, depending on the type of employer. This increase is attributed in large part to the new policy implemented in 2012, which grants the entitlement of reduced hours to all regular employees, irrespective of organisational size.

In this context, Table 5.4 lists the chronology of key laws and reforms relevant to flexible work. The initial law was enacted in 1988¹⁰ as part of the reform of the Labour Standards Act. However, its primary purpose was to provide employers with the means to distribute working hours more evenly throughout a month, rather than granting employees the choice of their work hours. It was not until 1992, with the introduction of the first Child-Care Leave law, that employees with children under one year old – both mothers and fathers – were allowed to take parental leave or adopt flexible work arrangements, such as reduced-hours. Nevertheless, eligibility for these provisions remained restricted to employees with indefinite contracts.

In 2002, the entitlement was expanded to include employees with children under three years old or those providing elderly care. Since the law had only been applied when the employee made a request, the subsequent 2010 reform required employers with over 100 employees to establish a system for flexible work, irrespective of employee requests. Furthermore, in 2012, this requirement was extended to include all employers regardless of the number of employees.

On reduced work hours for parents, the current law mandates employers to offer female and male employees who have a child under 3 years old an option to shorten the working hours to, in principle, 6 hours per day. However, several major corporations extend this benefit until the end of elementary school (HR Vision Co. n.d.; MHLW 2022c). When an employee work reduced-hours, salary and social security contributions are deducted accordingly.

To be eligible for this provision, employees must have been with the organisation for at least one year and have not worked fewer than two days a week (MHLW n.d.f). Adjustments can be made to accommodate individual circumstances, such as reducing the number of working days per week. Additionally, if an employee raising a preschool-age child or caring for an elderly family member requests an exemption from overtime, the employer is obligated to allow them not to work beyond the specified hours. Furthermore, employers unable to accommodate reduced work hours for employees – often due to challenges related to maintaining productivity, service delivery, or finding suitable replacements – are obligated to offer flexible work hour options instead.

¹⁰ All years regarding policies indicate the years in which the laws were enforced.

Table 5.4 Chronology of Laws related to Reduced hours and Flexible Work in Japan

#	Year	Content
1	1992	Child-Care Leave Law mandated employers with more than 30 employees to allow parents with children under one year old to take leave or to work with reduced hours, when requested. Only employees with indefinite contracts and who have worked for the employer for more than a year were eligible.
2	1995	Child-Care and Family Care Leave Law The eligibility applied to all employees, regardless of the size of the employer . Coverage was also expanded to employees with elderly care. The law was thus renamed accordingly.
3	2002	The coverage for flexible work was extended to children under three years old. However, employers selected and offered either reduced work hours, flexi time, or staggered hours to employees. Employers were prohibited to require parents with pre-school children to work overtime of more than 24 hours per month or 150 hours per year.
4	2005	Fixed-term employees became eligible to take family care leave. Coverage of parental leave was extended to the child's age of one year and six months, for exceptional cases.
5	2007	Work Life Balance Charter issued (see Appendix 5).
6	2010	Employers with over 100 employees were required to establish a system to provide reduced work or flexi time regardless of the request from employees. They were also mandated to exempt employees with children under 3 years old from overtime work when requested. Parents with pre-school children became entitled to extra leave for 5 days per year for health reasons if they had one child, and 10 days per year if they had two or more children.
7	2012	Employers with less than 100 employees were required to establish the same system. Reduced hours were also defined as, in principle, 6 hours of work per day.
8	2016	Act on Promotion of Women's Participation and Advancement in the Workplace Employers with more than 301 employees were required to establish and report to the MHLW an action plan on enabling employees to maintain WLB and adjust working style.
9	2017	Parents became eligible to take leave for their children's health related reasons in half-day units. Extension of parental leave became possible up to two years.
10	2019	Work Style Reform extended eligibility for flexible work to all employees, irrespective of their family caregiving status. However, this eligibility requirement must be clearly outlined in the employer's rules and the employee contract. The duration for averaging the total work hours was extended from one month to three months. Additionally, it established a legal maximum monthly overtime limit of 45 hours and an annual limit of 360 hours.
11	2022	Parents became eligible to take leave for their children's health related reasons in hourly units. Large companies are required to encourage childcare leave to their employees, particularly expectant fathers, and publicise the uptake of childcare leave statistics.

Source: MHLW (n.d.d n.d.e), Amano (2009), Nakagawa (2016), Nagase (2021), Uenishi (2022)

Employees are also entitled to leave days in order to care for their sick preschool-age children, which can also be used for regular medical appointments. They are allowed five days for one child or ten days for two children or more per year. Since 2021, leave can be taken in units of hours instead of days. With this revision, all workers with childcare or family care responsibilities can now take leave for the desired number of hours, including those who work less than four hours a day.

Moreover, since 2019, the Work Style Reform has made the flexible work hour system available to all workers with regular contracts. The MHLW is promoting the use of this system to enable diverse ways of working that could meet the needs of different lifestyles and life stages, such as to take care of family matters, engage in skills development training, avoid rush-hour commutes, secure time for pursuing hobbies, and so on (MHLW 2020, 2021a).

However, this requires employers to establish employment rules that specify items such as: standard daily work hours; the total work hours to be distributed evenly within a month; the employee's right to determine start and end times within the core work hours; and similar provisions. Furthermore, the framework for flexible work needs to be included in the employment contract. Under this law, total work hours can be smoothed out over a maximum period of three months, allowing parents, for instance, to work longer hours during school weeks and shorter hours during school holidays. If the adjustment period extends beyond one month, employers are obligated to notify the Labour Standards Inspection Office to ensure proper management of work hours. Meanwhile, this reform has a limited impact on lower-skilled part-time workers who already maintain relatively flexible work schedules in exchange for lower wages and minimal social security coverage (Matsui 2016). Consequently, the government has decided to offer subsidies to employers who convert part-time workers into regular employees with reduced work hours (MHLW n.d.f).

UK

The first law granting flexible work in the UK was established in 1996, primarily aimed at parents with children up to six years old. In 2002, it became a statutory right for eligible employees and a legal requirement for employers to respond to such requests. Subsequently, in 2003, the government released a policy document that outlined a strategy to promote WLB for workers, by articulating the social, business, and economic rationale for flexible work (Department of Trade and Industry 2003).

It states that, while the family model in the 1950s featured the father as the breadwinner and the mother as homemaker, the landscape has transformed; the majority of families have both parents working or/are headed by single parents, with most women participating in the workforce. However, despite these changes, women still shoulder the burden of caregiving responsibilities, which affect their earnings. Balancing work and caregiving is stressful for parents, while businesses have to prioritise the retention of employees with caregiving responsibilities. Consequently, policies are deemed necessary to provide better support for families, which could benefit children's well-being, promote gender equality, and enhance workforce productivity.

In implementing the WLB strategy, the right to work flexibly was extended to employees who took care of family members in 2006, including the elderly and disabled adults. In 2014, this right was further extended to all employees, regardless of their parental or caregiver status. However, employees must have worked continuously for at least 26 weeks with the employer (GOV.UK n.d., The National Archives n.d.a). The chronology of relevant policy changes is listed in Table 5.5.

Flexible work can take various forms (GOV.UK n.d.), including:

- **Job sharing:** Two people do one job and split the hours.
- **Working from home:** Some or all of the work can be done from home or anywhere else other than the normal place of work.
- **Part time:** Working fewer than full-time hours or fewer days.
- **Compressed hours:** Working more than full-time hours but over fewer days.
- **Flexi time:** Allowing employees to choose when to start and end.
- **Annualised hours:** Requiring employees to work a certain number of hours over the year, with some flexibility about when they work. There are sometimes 'core hours' which the employee regularly works each week, and they work the rest of their hours flexibly or when there is extra demand at work.

- **Staggered hours** Having different start, finish and break times compared to other workers.

Table 5.5: Chronology of Laws related to Reduced hours and Flexible Work in the UK

#	Year	Content
1	1996	Employment Rights Act provided parents with children up to 6 years old or children with disabilities up to 18 years old the right to request a change in their working hours. While employers were not legally obligated to grant the request, they were expected to give it due consideration and explore potential options for flexible work.
2	2002	Statutory Right: The 2002 Act made the right to request flexible work a statutory right for eligible employees, meaning that employers were legally obliged to consider and respond to such requests.
3	2003	Balancing Work and Family Life: Enhancing Choice and Support for Parents document issued by the Department of Trade and Industry
4	2006	Work and Families Act extended the right to request flexible work to carers of adults.
5	2009	Eligibility was extended to parents with children up to 17 years old.
6	2014	Children and Families Act further expanded the right to request flexible work to all employees with at least 26 weeks of continuous employment, removing the previous restriction based on parental or carer status.
7		Flexible Working Regulations provided a framework for requesting for and responding to flexible work, including time limits and grounds for refusal by employers.

Source: The National Archives, n.d.b, GOV.UK n.d. Wakisaka 2018

In sum, the evolution of flexible work in the UK showcases a progressive trajectory aimed at promoting WLB. Beginning with the 1996 Employment Rights Act, which granted parents of young children the right to request adjusted working hours, the legal landscape has undergone significant transformation. In particular, the landmark 2014 Children and Families Act has broadened the scope of eligibility to include all employees with continuous employment. From job sharing to staggered hours, the diverse array of flexible work options outlined in this section underscores the UK's commitment to fostering a more adaptable and accommodating work environment for its workforce.

Comparison of Policies between Japan and the UK

In terms of historical sequencing of laws for flexible work, the above showed that Japan established the first law in 1992, preceding that of the UK in 1996. However, the coverage in Japan was much more limited from the beginning. Initially, children had to be under one year old in Japan, while in the UK, parents with children up to six years old were eligible from the start, which was later extended up to 17 years old. Furthermore, while the scope was expanded to include elderly care earlier in Japan in 2002, preceding the UK in 2006, the latter allowed parents of disabled children up to 18 years old to work flexibly as well, which is not covered by Japan's Childcare Family Care Leave Act. Additionally, while the 1996 law in the UK allowed parents to request a change in working hours, this was not explicitly included in the 1992 law in Japan. Table 5.6 compares the flexible work systems of the respective countries.

Table 5.6: Comparison of Flexible Work System between Japan and the UK

Country/ Aspect	Japan		UK
Entitlement	Flexible work for carers	Flexible work for all workers	
Law	Childcare and Family Care Act	Labour Standards Act	Employment Rights Act
Eligible employees	Employees with infants under three years old or the elderly to take care	All employees	All employees
Legal status	Applicable employees have a right	Employees have a right when the employer establishes rules and state it in employment contracts	Employees have a statutory right and employers have an obligation to respond to requests in a reasonable manner.
Employment requirement	Employee must have worked for the employer for at least one year	At the discretion of the employer	Employee must have worked for the employer for at least half a year
Scope of reduced work hours	Reduced work hours is, in principle, 6 hours.		No specific standard
Salary and social security for reduced work hours	For reduced-hour workers, salary and social security contributions are deducted pro rata.		
Flexible work hour adjustment	Maximum three months		No legal maximum. Possible to adjust within a year through annualised hour contract.
Additional leave	Extra leave of five days per child per year to take care of children for health reasons. Leave can be taken in hourly units.		18 weeks of unpaid leave per child or adopted child until his/her 18 th birthday. Leave must be taken in weekly units.
Additional entitlement	Employee is exempt from overtime if requested		

Source: GOV.UK n.d., MHLW n.d.d.

Concerning the expansion of flexible work eligibility to all employees regardless of parental status, the UK preceded Japan by extending it in 2014, while the latter followed suit in 2019. However, in Japan, employees have not been automatically entitled to flexible work; it depends on whether the employers include it in their employment rules and contracts. In contrast, the UK established a statutory right for employees, obligating employers to consider requests and allowing refusal only for legitimate reasons based on guidelines.

Furthermore, there are key differences in eligibility requirements between the two countries. While Japanese employees must have worked for the employer for at least one year to make a flexible work request when caring for children or the elderly, the requirement is only six months in the UK. Under the Work Style Reform in Japan, however, eligibility is at the discretion of the employer.

Looking ahead, the UK is poised to remove even the 6-month requirement, considering making flexible work the default from day one (Department for Business, Energy & Industrial Strategy 2022). This marks a significant departure from the Japanese approach, where reduced or flexible work remains primarily an exception, especially for mothers with young children. Furthermore, flexible work is often perceived negatively by colleagues and management in Japan, seen more as an unwelcome inconvenience (Brinton 2022; Hattori 2015; Teramura 2015) than a clear benefit for the organization and society. While the promotion of WLB and continuous employment could lead to enhanced utilisation of human capital and higher long-term productivity (Brinton 2022; Ikemoto 2003; Yamaguchi 2017), the prevailing perception of flexible work in Japan sharply contrasts with its potential benefits.

Use of Policies

Japan

According to the 2021 Basic Survey of Gender Equality in Employment Management, 73% of employers claim to have a flexible work system for their employees (MHLW 2022b). While the law only requires employers to provide measures with children up to three years old, 56% of employers voluntarily extend the eligibility to include children up to their entry to elementary school, and 20% even up to the completion of primary school years. Furthermore, 40% of employers have a flexi work system allowing employees to adjust their start and finish times, and a further 18% for more flexibility.

On the other hand, in terms of actual usage, only 17% of employers have at least one employee who used the reduced work-hour system, of which 95% are females. Similarly for only 13% of employees had at least one employee use the staggered work hour system, of which 68% were females. These data indicate that employees, particularly males, rarely utilise these WLB measures, even when they are available to them.

The availability of different WLB measures differs significantly depending on whether one is a regular or non-regular employee. Table 5.7 presents the percentages of married women aged 29-38 years old (or whose husbands were in that age range) with children who had access to WLB measures, according to the 10th Longitudinal Survey of Adults in the 21st Century (2012 Cohort). It shows that, among regular employees, 95% had access to parental leave, but only 81% and 54% had access to reduced work hours and flexi time, respectively. Furthermore, for non-regular employees, these percentages were considerably lower at 45%, 40%, and 22%, respectively. Therefore, it is evident that twice as many regular employees had access to WLB measures compared to non-regular employees, with flexi time being the least available option for both types of employees (MHLW 2022d).

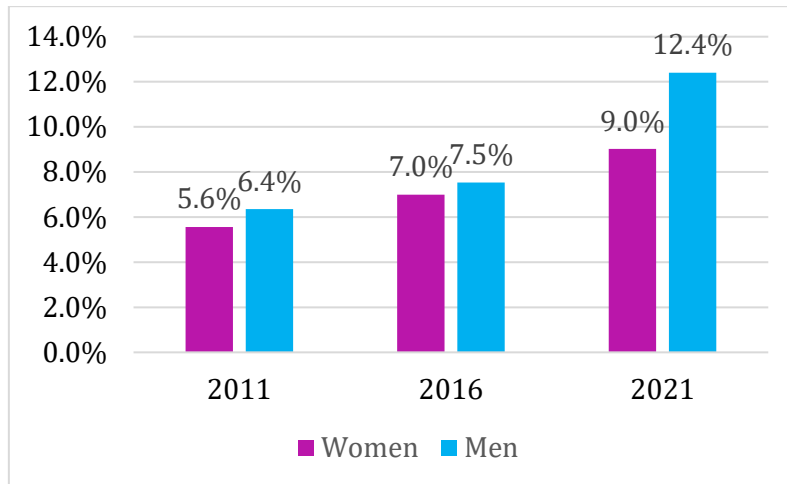
**Table 5.7: % of Married Women with Births
Who Reported System Availability for Their Use**

	Regular Workers	Non-Regular Workers
Parental Leave	95%	45%
Reduced Work Hours	81%	40%
Flex Time	54%	22%

Source: Author's calculations based on the 10th Longitudinal Survey of Adults in the 21st Century (2012 Cohort) (MHLW 2022d)

Another source of statistical data is the government's Survey on Time Use and Leisure Activities, conducted every five years. Figure 5.4 illustrates a notable trend: the share of workers who reported the availability of flexi time at their workplace has constantly increased from approximately 5-6% in 2011 to 9-12% in 2021, depending on the gender (MIC 2011, 2016, 2021). Male employees consistently reported higher rates of availability than their female counterparts. This discrepancy may arise because flexi time is typically offered to regular employees, who are more commonly men, while a lower proportion of women are in regular employment. It is, however, important to note that various factors can influence respondents' answers. Some may not have been aware of the system's existence due to its limited usage or simply because they lacked interest in utilising it. Conversely, others might have indicated that the system was unavailable, even if it was *de facto* accessible, possibly due to a workplace atmosphere discouraging its use (Brinton *et al.* 2021; Teramura 2015).

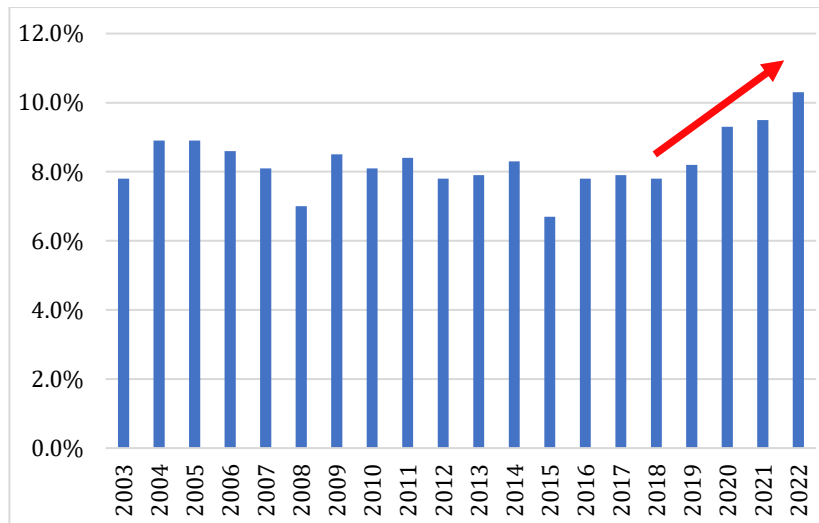
Figure 5.4 Share of Full-Time Employees Who Responded that Flexi Time was Available at Work



Source: Surveys on Time Use and Leisure Activities (MIC 2011, 2016, 2021)

As the availability of WLB measures does not necessarily translate to actual usage, Figure 5.5 shows the percentage of full-time employees working under a flexi time arrangement from 2003 to 2022, based on the General Survey on Working Conditions (MHLW 2003-2022). While the data do not provide a gender breakdown, the picture reveals that, prior to the Covid-19 pandemic, the percentage fluctuated within the range of 6.9-8.9%. However, possibly due to the emergency measures implemented against the pandemic, the proportion consistently increased

Figure 5.5 Share of Full-Time Employees working under a Flexi Time Arrangement



Source: General Survey on Working Conditions : 2003-2022

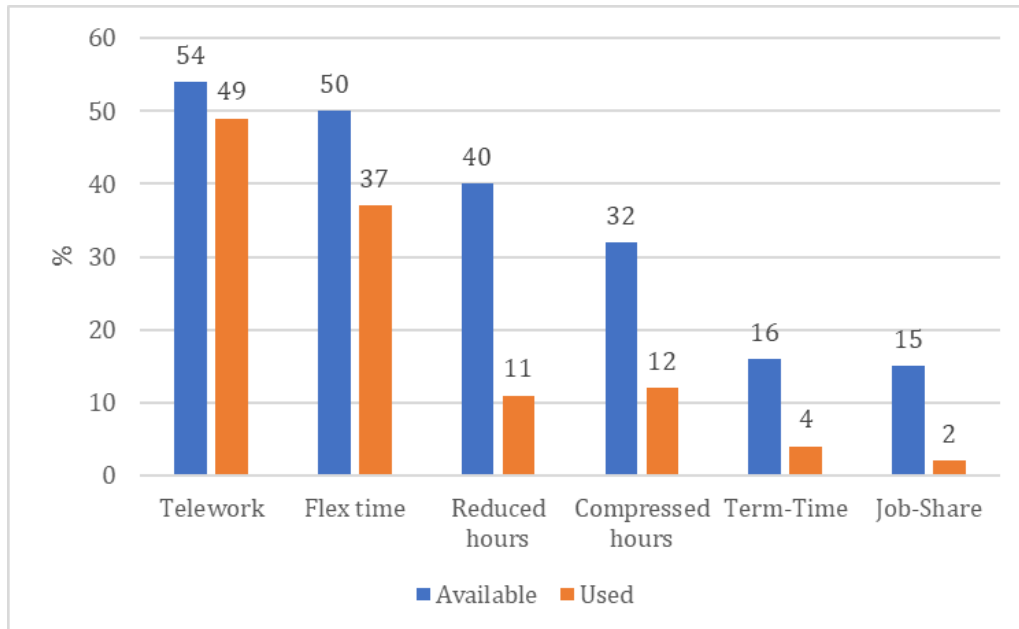
from 7.8% in 2018 to 10.3% in 2022. If both employers and employees continue to recognise the benefits of flexi time arrangements even after the epidemic, there is potential for this rate to continue its upward trajectory.

UK

In the UK, the Chartered Institute of Personnel and Development (CIPD), a prominent association for human resource management professionals, provides reports on the availability and utilisation of various WLB measures. According to the survey conducted in January and February 2023, as shown in Figure 5.6, approximately half of employees had access to both telework and

flexi time. While the high adoption of telework in the past 12 months is understandable due to the COVID-19 pandemic, it is noteworthy that over a third of employees were actively using the flexi time system. Moreover, only 11% of employees opted for reduced-hours, which is less popular as it entails income reductions.

Figure 5.6: Availability and Use of Flexible working in the UK



Source: Brinkley (2023)

The availability of various alternative flexible work arrangements in the UK allows employees to explore options beyond reduced-hours, unlike in Japan (Takeishi & Matsubara 2014). It is worth mentioning that the survey conducted in 2019 (CIPD 2019; Wheatley & Gifford 2019), prior to the COVID-19 pandemic, had already indicated similar, though slightly lower, figures. This demonstrates how flexible work was gaining traction in the UK even before the government's measures to combat the disease and the subsequent global shift in working practices. In fact, Box 5.2 describes the degree to which flexible work was already prevalent in the UK in 2000.

Meanwhile, to gain a more precise understanding, it is relevant to examine the share of employees with dependent children who have utilised alternative working arrangements. According to the 2019 UK census, approximately 61% of mothers and 63% of fathers stated that it was generally possible to have alternative working arrangements, such as flexi time, compressed hours, and on-call work (ONS 2019). Moreover, the 2021 census reveals that 32.6% of females with dependent children and 23.3% of males with dependent children reported that they had an agreed special working arrangement regarding their working hours (ONS 2022). Table 5.8 provides a breakdown of the various flexible work arrangements adopted by employees, both with and without dependent children.

First, it is notable that 27.9% of females and 21.7% of males without dependent children were working flexibly. While these percentages are lower than those for employees with dependent children, they are still significant. Second, in all categories except for four-and-a-half-day week and on-call working, females were generally utilising these measures more than males, or at least to a similar extent.

Box 5.2 Flexible Working in the UK in 2000

The UK government launched a WLB Campaign in the spring of 2000 to raise employers' awareness of the benefits of introducing practices that help employees achieve a better WLB. In this context, Hogarth *et al.* (2001) conducted a baseline study to assess the extent to which employers implemented WLB practices. This assessment was carried out through surveys involving 2,500 workplace employers and 7,500 employees, along with interviews of 250 employers at their head offices. The following are key findings, some of which are based on the 1999 Labour Force Survey:

Full-time vs. Part-time workers

- 44% of females and 8% of males were working part-time, but they were mostly students aged 16-17.
- About 53-55% of establishments allowed staff to move from part-time to full time and vice versa.

Employer Provision of Flexible Work

- Around 80% of establishments allowed reduced-hours and flexi time, respectively, for all employees (full or part-time, or managers) without restriction.
- 85% of head offices had written policies on flexi time.
- While 66% of employers did not have written policies for reduced hours and 47% for flexi time, they still offered flexible working arrangements.
- Among employees with more than 25% of staff working flexi time, about 23% of managers had discretion over who was eligible to use flexi time.

Employee use of flexible work

- About 25% of women and 23% of men were using flexi time arrangements.
- 21% of female managers and 30% of female professional workers were working part time.
- Among public service employees, 65% were working reduced-hours, 12% flexi time, and 7% part-time.

The data above reveals a striking contrast in labour market characteristics between the UK over 20 years ago and the current situation in Japan. In the UK, part-time employment was primarily occupied by students, whereas in contemporary Japan, a notable proportion of part-time workers consists of older females. Furthermore, in the UK, transitioning between full-time and part-time roles was relatively common, enabling adjustability. However, in Japan, returning to full-time employment, particularly for females, is exceptionally challenging unless it is for a non-regular position.

In the UK, a substantial share of establishments had already implemented written policies on flexi time, facilitating its use across all employee categories, encompassing full-time, part-time, and managerial positions. Even without formal policies, many employees in the UK embraced flexible work practices, with decision-making decentralised to the managerial level. In stark contrast, in Japan, flexible work arrangements are only accessible when there are established policies set by the employer.

Furthermore, in the UK, the adoption of flexible working arrangements is widespread, encompassing not only females but also males and even managerial staff. However, in Japan, flexible work is primarily undertaken by females with young children who typically opt for reduced hours rather than flexi time. Consequently, Japan has a considerable way to go if it aims to catch up with the WLB levels that the UK had achieved even two decades ago.

Table 5.8: Flexible working with and without dependent children

Arrangement	Definition	Female		Male	
		With Dependent Children	Without Dependent Children	With Dependent Children	Without Dependent Children
Flexitime	Varied start/end time but with core hours	14.8	13.5	12.1	11.3
Annualised hours contract	Work hours calculated within a year	6.4	6.0	5.4	5.6
Term time working	Work during school terms	8.6	5.2	1.7	1.1
Job sharing	Full-time job is divided by 2 or more people	<0.5	<0.5	<0.5	<0.5
Nine-day fortnight	Work 10-day hours in 9 days and take 1 day off	0.7	0.6	<0.5	<0.5
Four-and-a-half-day week	Work 5-day hours in 4.5 days and take 0.5 day off	0.6	0.6	0.6	0.8
Zero hours contract	Paid for number of hours worked	1.1	1.5	1.1	1.4
On-Call Working	Paid for hours worked on short notice	2.0	1.7	3.4	2.4
Total		32.6	27.9	23.3	21.7

Source: ONS 2022

In terms of specific working arrangements, the flexi-time system is the most popular choice, with 11-15% of employees having varied start and end times, although these hours typically need to include core hours. Another arrangement, used by 5-6% of both female and male workers, pertains to an annualised hour contract in which the total number of work hours is fulfilled within a year. However, there is gender difference in the term-time working arrangement (employees work only during school terms): while 8.6% of females with dependent children have this arrangement, only 1.7% of males with children do. The rest of the measures are not widely adopted, but collectively enable 4-6% of employees to work flexibly and achieve a better WLB, regardless of whether they have dependent children or not. By adding up these percentages, it can be estimated that approximately 28-33% of women and 22-23% of men in the UK are using some form of flexible work system, regardless of whether they have children or not.

Comparison of Use between Japan and the UK

As shown above, both Japan and the UK are implementing flexible workplace policies to address WLB issues. In Japan, a significant number of employers provide reduced work hour systems and flexi time arrangements that allow employees to adjust their start and finish times. Similarly, in the UK, slightly less than half the employees report having access to flexible work systems, which encompass a variety of options beyond reduced hours and telework.

However, there are notable differences between Japan and the UK in terms of utilisation and gender dimensions. In Japan, the actual usage of reduced work hour systems and flexi time arrangements is relatively low, hovering around 10%. Furthermore, employers report that over 90% of users are women. In contrast, the UK demonstrates higher utilisation rates, with around a third of employees having used flexi time and teleworking even before the COVID pandemic. Importantly, in the UK, besides females, a significant proportion of males also take advantage of flexible work arrangements, indicating a more gender-equal distribution.

Disaggregating the usage according to parental status in the UK, data show that one out of every three mothers and one out of every four fathers with dependent children have special working arrangements. At the same time, it is evident that the utilisation of flexible work is also prevalent among employees who do not have dependent children. Furthermore, the UK offers a more comprehensive set of working arrangements, including annualised hours contracts, term-time working, job sharing, nine-day fortnights, and four-and-a-half-day week contracts. While these arrangements may be possible in Japan if the employer agrees, they are not as clearly defined as options as they are in the UK.

In sum, this comparison between Japan and the UK underscores the significant disparity in workplace flexibilities. The UK's extensive range of flexible work options may be enabling young females to envision career progression while effectively balancing their roles as parents, often sharing responsibilities with their partners. This optimistic outlook, in turn, can be fostering their expectations for a broader spectrum of challenging occupations. Conversely, the restricted possibilities for flexible work in Japan may be circumscribing the range of occupations that could align with achieving an optimal WLB for Japanese females.

Assessments on the Flexible Work System

Japan

In Japan, there is a notable difference in the number of studies on reduced work hours compared to flexi time. This imbalance can be attributed to the prevalence of reduced work hours in comparison to flexi time, as shown in Table 5.7. The underlying reason for this contrast lies in the relative ease with which employees – particularly mothers with young children – can transition to reduced work hours, presumably because it provides employees with a sense of diminished unease, while employers tend to be more accommodating due to the lower pay involved. In contrast, requesting flexible hours often presents a more complex challenge. The intricacies of managing irregular schedules can make both management and employees apprehensive. Employees may grapple with feelings of guilt when leaving the office early, or not adhering to standard workdays, coupled with concerns about how their colleagues perceive their commitment to work (Brinton *et al.* 2021).

Nonetheless, given that reduced work hours represent a form of flexible work and are crucial for enabling women to sustain their careers while taking care of young children, it is important to review studies that assess their effectiveness. For example, Nagase (2017) shows that, the use of reduced work hours (less than 30 hours a week) rose among the proportions of female regular employees with children under three years old. As the policy has been enforced across several types of employers in different years– the public sector since 2007, companies with more than 100 employees since 2010, and companies with less than 100 employees since 2012 – the rise generally took off after the respective year of enforcement. On average, the proportion of female regular employees with infants who were working with reduced hours increased from around 20-30% in 2002 to 50-60% in 2015. Subsequently, Hirakawa (2020) also finds that the reduced work hour system has an effect in raising the continuation rate of female regular employees after their first births in private and small companies. In addition, Fujima (2021) shows correlations between utilisation of the reduced work system and continuity of employment by mothers who have regular or irregular employment.

Regarding the occupational categories of females who use the reduced work-hour system, Sakazume (2017) finds that 84% were in routine jobs, while 16% held high-skilled positions, before they transitioned to reduced-hours. This distribution may reflect the lower representation of women in high-skilled roles compared to the larger number of women in administrative positions to begin with. However, while 60% of the managers consider their high-skilled

subordinates who work reduced-hours as assets to the organisation, this perception drops to 34% when it comes to managers whose subordinates with routine jobs are working reduced-hours. This suggests that the reduced work hour system is retaining a greater number of women who are in routine roles, often viewed as more replaceable. However, it may also be keeping the fewer highly skilled women, valuable assets to the organisation, who might otherwise leave without the option of reduced work hours.

Meanwhile, Takeishi (2013) points out that the uptake of the reduced work hour system for childcare remains low and is also rarely offered except for family responsibilities. Since the standard of workplaces is for employees to do overtime and/or work on weekends, reduced work-hour employees are frequently considered as exceptional (Brinton *et al.* 2021; Yamaguchi 2017). Therefore, Takeishi raises several challenges – for example, meetings are often organised during the time when reduced-hour workers cannot participate or there are cases where they end up working normal hours, although they are entitled to be exempted from overtime.

Furthermore, performance reviews of reduced-work workers can be problematic if they are assessed not only in terms of quality of work but quantity of work. As a result, they could face a double negative impact of reduced wages and unfairly poor evaluations. In addition, some parts of the organisation may resist accepting transfers of reduced-hour workers. This could demotivate the workers which could lead to a spiral where they feel that the reduced-hours limit their opportunities and the return to full-time work becomes increasingly difficult.

Takeishi stresses the urgency of advancing the work style reform as well as improving the workplace environment. In order to minimise the number of women leaving their jobs due to childcare, there is a need to establish a work-friendly environment where reduced-hour workers are not treated as special. At the same time, she emphasises the importance of reduced-hour workers to have a vision for their future career and become involved in important work without being constrained by the idea that childcare is solely the mother's responsibility. She concludes that it is essential to refer to examples from Europe and consider the challenges and countermeasures associated with the use of short working hours by all regular employees.

A potential avenue for future research could investigate how flexible work arrangements, including reduced work hours, impact women in different occupations. Additionally, given the widespread adoption of teleworking during the COVID-19 pandemic, exploring its influence on corporate policies regarding flexible work and its effects on women's WLB would be valuable.

UK

In the UK, various studies have examined the advantages and disadvantages of flexible work. Rubery *et al.* (2016) observe that flexible work within existing full-time roles enable many mothers with children to maintain their career positions. The Centre for Progressive Policy (2021) also reports that flexible work among parents is widespread, with 85% of mothers having access to some form of flexibility, although it notes that only 46% say they have a 'good' level of flexibility. Similarly, Gatrell *et al.* (2014) find that both mothers and fathers with dependent children face challenges in accessing flexible work opportunities. Moreover, the Trades Union Congress (2021) claims that half of working mothers have had their flexible work requests rejected or only partially accepted by their employers and that 86% of these mothers say that they have been inconvenienced as a result.

The question of who has better access to flexible work yields mixed views. Rubery *et al.* note that flexible work options could be accessible to managerial and professional employees. On the other hand, Gatrell *et al.* find that managers often believe that their supervisory roles are not suitable for flexible work arrangements. Additionally, the above Centre reports a discrepancy in access to

good flexibility at work based on household income. While 59% of mothers with household incomes above £100,000 claim to have good flexibility, this figure drops to 39% for mothers with incomes ranging from £7,001 to £14,000. This disparity could be attributed, in part, to the nature of certain occupations that do not readily accommodate flexible work arrangements, potentially linked to required skill levels and thereby income levels.

Alternatively, Adams-Prassl *et al.* (2020) state that, while there is a concern over potential worker exploitation in flexible arrangements, firm demand for flexible work has been relatively unexplored in research, with older literature predominantly focusing on temporary employment and recent literature mainly centring on worker preferences for flexible jobs. Furthermore, they claim that data and measurement issues, including inconsistencies in questions about alternative work arrangements asked over time, have posed challenges for empirical research in this field.

To address these gaps, the authors analysed over 60 million online job vacancies in the UK using machine learning word search. Their findings reveal that flexible work is more likely to be found in low-paid and unfixed salaried jobs, especially in lower-skilled elementary and sales occupations. At the same time, it is essential to note that the study focuses solely on job advertisements rather than the actual realised work arrangements. Therefore, it may grossly underestimate the use of flexible work by higher skilled fixed salaried workers whose original job description did not state the possibility of flexible work.

Rubery *et al.* also criticise flexible employment policies, highlighting their role in the proliferation of low-paid and insecure part-time positions, including zero-hour contracts, agency workers, and pseudo self-employment, which often offer limited opportunities for career advancement. They emphasise that, while workers have a legal right to request flexible work, they lack a statutory right to request a return to full-time employment. This suggests that some employees encounter difficulties when seeking to transition back to full-time roles with corresponding pay. Additionally, these policies may have the unintended consequence of diminishing productivity by favouring a short-term, disposable labour model over a longer-term investment-oriented approach. Furthermore, the authors contend that the government's need to provide compensation in the form of tax breaks and welfare benefits to a growing population of low-income workers is eroding the fiscal base.

In sum, studies in the UK suggest that flexible work has enabled many mothers to maintain their career positions, although access is not always guaranteed, leading to workplace disadvantages for some working parents. While certain studies indicate that higher-income mothers have better access compared to their lower-income counterparts, others claim that flexible employment policies have contributed to the growth of low-paid and insecure part-time positions. Given the focus of the current study on the use of flexible work among women in high-skilled permanent positions, future research could further explore this category, with particular attention to selected high-SES occupations in the UK.

Comparative Studies on WLB between Japan and the UK

There are a few studies that examine WLB policies in the UK to contrast with Japan. One is by Takeishi & Matsubara (2014) who compare the flexible work system in the UK to extract lessons. They emphasise that in the UK, flexible work is offered in various forms and accessible to all employees. The authors observe the frequent usage of flexi time, staggered start and end times, as well as compressed or annualised work hours where employees could work longer hours on some days and take regular days off or align their schedule with school breaks. Teleworking has also been prevalent in the UK long before the COVID-19 pandemic. For example, they report that even as early as 2010, around 30% of females and 25% of males were using flexible work, including around 13% flexi time and 7-8% annualised hours for both males and females.

The study reveals that, instead of relying on a formal contract outlining specific arrangements, flexible work in the UK often involve informal agreements between managers and employees. In fact, these arrangements do not often entail reduced work hours and subsequent pay cuts, as the flexible work style allows employees to adapt their schedules without necessarily working fewer hours. Furthermore, the research does not uncover instances of employees being penalised for opting for flexible work, especially since the priority for employers lies on the quality of output, irrespective of working hours. Nonetheless, management and supervisors receive seminars aimed at educating and informing them about the benefits of implementing flexible work. This is considered necessary to retain competent employees, keep them motivated, and ultimately enhance productivity.

Concerning Japan, however, Takeishi & Matsubara criticise the limited progress in the effectiveness of reduced work policies and the minor reforms over the past 30 years. They suggest that Japan could benefit from the UK's approach of making flexible work the norm for all employees rather than the exception. While this shift requires a major cultural change, it is imperative for working parents to achieve a better WLB to maintain their careers. Additionally, an enhanced WLB is also crucial for employers as they could retain competent employees and benefit from their experience, leading to improved productivity, service quality, and profits. Specifically, the authors state that expanded flexible work arrangements could boost the retention rate of highly skilled mothers, which could create role models for young females who may aspire to pursue similar occupations in the future.

Another study by Wakisaka (2018), examines findings from the UK's Fourth WLB Employee Survey conducted in 2011 (Tipping *et al.* 2012). Some highlighted points indicate that a significant proportion of reduced work hours is unrelated to childcare. Additionally, between 79% and 91% of requests for flexible work are granted, and over 40% of employees believe that they could participate in job sharing. Teleworking is more common among males (33%) compared to females (27%). The survey data indicate that 60% of all employees in the sample had experienced some form of flexible work in the past year, with 32% utilising reduced work hours, 23% engaging in flexi time, 13% teleworking, and 10% participating in school term-time working and annualised hour contracts, respectively. These figures differ from those presented in the 2021 census in Table 6.7, possibly due to variations in survey methods and potential shifts in work patterns over the course of a decade.

In addition, Wakisaka also highlights the responses to the question regarding the consequences of colleagues' working flexibly. While 55% responded that there were no positive consequences, 57% also reported that there were no negative consequences either. Among the positive consequences, 14% responded that there was a better working atmosphere and 7% said that colleagues' flexible work allowed other staff to work flexibly too. Among the negative consequences, 9% related to the lack of interaction between staff, 8% inaccessibility to colleagues, and 8% heavier or varied workload. He considers these results to be similar to the situation in Japan.

Summary

In recent years, flexible work systems have gained increasing importance in both Japan and the UK, as a growing number of working parents seek ways to harmonise their professional and family responsibilities. In this context, this chapter showed the significant difference between Japan and the UK in terms of the policies and use of flexible work. This section highlights three key distinctions.

First, flexible work in Japan is, in practice, limited to mothers of young children or carers of the elderly and is considered an unwelcome exception in the workplace. In particular, the system

tends to benefit administrative assistants with regular contracts, although it also retains the few women in higher-skilled positions from opting out for childcare. In contrast, in the UK, flexible work is widely adopted by both female and male employees, including those in managerial and professional roles, and those without children.

Second, in Japan, flexible work often implies reduced work hours, as employees can more easily justify working fewer hours, and employers may find it more acceptable since it entails lower pay. In contrast, working reduced hours is less dominant in the UK due to the openness to a menu of flexible work arrangements that allow employees to avoid the option involving decreased earnings.

Third, the eligibility criteria for reduced work hours differ significantly between the two countries. In Japan, employees who have the right to flexible work due to caring responsibilities for young children or the elderly are required to have one year of service. For other employees in Japan, the requirement for employment tenure depends on the rules established by their employers, indicating that they do not have an automatic right to flexible work. In contrast, in the UK, this requirement is as low as 26 weeks, with upcoming plans to expedite entitlement from the very beginning of employment. Notably, the UK government is actively working towards making flexible work the standard rather than the exception (Department for Business, Energy & Industrial Strategy 2022).

In conclusion, to adopt a similar practice, Japan needs to undergo a major shift in values, placing greater importance on output rather than time input. This transformation is particularly crucial as flexible work will become increasingly indispensable for employers aiming to retain employees, maintain their motivation, and enhance productivity. Embracing this change extends to competent female employees seeking to continue their careers while maintaining a fulfilling family life. If professional and managerial women with children can establish a critical mass of role models, it holds the potential to inspire hope and confidence in young female students, ultimately raising their occupational expectations.

Appendix 5: WLB Charter

In 2007 a WLB Charter was established in Japan by a multistakeholder group comprising representatives from business, labour, regional authorities, experts, and relevant cabinet members (MHLW 2007). This charter articulates the rationale behind the necessity of WLB and lays out a path forward. Recognising the interdependent relationship between WLB and economic growth, it identifies key challenges faced by individuals in dealing with managing work and life effectively.

The first challenge mentioned is the escalation in global competition, structural shifts in the economy, and sluggish growth, contributing to a rise in non-regular workers struggling to secure stable employment and economic independence, particularly among the youth. The second challenge refers to health concerns arising from excessive work hours, particularly among regular employees. In particular, the prevalence of 'black companies' that illegally coerce employees into long working hours has come into focus (Jo 2014). Although the Charter itself does not explicitly mention deaths due to excessive work, known as *karoshi*, this issue has been gaining prominence as a significant social problem. The third challenge evolves around the fact that, despite the increasing prevalence of dual-earner households, societal support structures and work patterns continue to align with the traditional breadwinner husband and housewife model. This deeply ingrained gender division of role has led to declining birthrates while hindering the full utilisation of the human capital of women and older individuals.

In response, the charter emphasises the shared responsibility of employers, employees, citizens, the government, and subnational authorities in addressing WLB. Employers and employees are urged to collaborate in reforming workplace norms and cultures to enhance productivity. Citizens are encouraged to reconsider their perspectives on WLB and actively engage in family and local community life. Additionally, consumers are called upon to consider the work styles associated with the services they seek. The government is expected to promote understanding, establish support systems, and facilitate environmental changes conducive to WLB. In addition, subnational authorities are encouraged to develop innovative initiatives tailored to local needs.

However, the charter does not explicitly establish a connection between the increasing number of non-regular employees and WLB, nor does it address how measures could alleviate these disparities and resolve low-income challenges. This aspect is particularly important in this thesis, given that a significant proportion of non-regular employees are females. Kuwashima (2017) also provides a critical assessment of studies examining WLB measures, shedding light on deficiencies inherent in social policies related to equal opportunities and childcare. These critiques draw attention to issues such as inequality in wage and benefits between regular and non-regular employment, limited access to childcare leave, and the exclusive nature of public childcare services tied to employment status. Her study concludes that the cumulative impact of these constraints has maintained a substantial gap between the ideal concept of WLB and the realities of life.

In addition, Yamaguchi (2017) comments that in fluid labour markets, where workers can easily switch to other organisations offering better conditions without significant costs, employers may not impose excessive overtime work. However, the majority of Japanese employers do not provide such opt-out choices, as explained in Chapter 1, which has led to the prevalence of extreme working hours and, in some cases, *karoshi*. Takeishi (2011) also presupposes the prevalence of long work hours against the will of the employees.

While crediting the government for establishing limits of maximum allowable overtime hours, Yamaguchi also criticises that the primary objective of the WLB policy has shifted towards

safeguarding employees' health and preventing *karoshi*. Consequently, the workstyle reform has not brought about a fundamental change in work patterns that prioritises productivity per hour, nor has it encompassed workers' legal rights to determine and manage their own time. In essence, he concludes that there has been a shift from a focus on improving the *quality* of work and life to a preoccupation with *quantity* regarding wages and working hours.

Chapter 6: Interviews on Occupational Expectations of Female University Students: Comparison Between Japan and the UK

Chapters 3 and 4 unveiled the low occupational expectations of Japanese girls against boys, as well as girls of other countries. These chapters elucidated that individual characteristics, such as educational expectation and academic proficiency within the micro/meso systems and broader gender equality landscape within the exo/macro systems contribute to this phenomenon, in line with the literature review. Expanding on these findings, this chapter presents the outcomes of an in-depth qualitative study comparing female students in Japan with those in another country, namely the UK. The study particularly focuses on university students since underutilising their competence results in a significant opportunity cost and societal loss.

Context

The purpose of this chapter is to investigate whether Japanese females indeed have modest occupational expectations and to explore the relationship with key factors discussed in Chapters 3 and 4, such as academic aptitude, parental education and occupations, and the gender equality landscape. This is carried out by comparing with another country. As explained in Chapter 5, the UK is chosen due to its status as a G7 nation and its greater progress on female labour-related issues than Japan, as demonstrated by relevant indicators. Furthermore, both countries share similarities as the UK falls on the traditional side of a Liberal Welfare state, while Japan is positioned between a Liberal Welfare and Conservative state. Hence, valuable lessons could be drawn from the UK's experience in raising the occupational expectations of young females.

With this background, 48 interviews were conducted among female students enrolled in universities in Japan and the UK. While recognising that the small sample size limits generalisation, this study aims to explore the realities of young women, comparing the experiences in the two countries, and triangulating with existing literature. This type of comparative study with real voices of young females on occupational expectations in Japan and another developed country is fairly limited. Ideally, including interviews with male students to gauge gender differences in occupational expectations in Japan and the UK would have been more consistent with the overall theme of the research. However, for the sake of simplicity, this study focuses exclusively on female students, allowing for a more focused exploration of the factors that either elevate or dampen the occupational expectations of females in both countries.

The following builds on the results obtained in Miyamoto (2023), which mainly compares the mother's influence on the occupational expectations of the interviewees in Japan and the UK. This chapter broadens the parental influence to include fathers as well and adds the dimension of the interviewees' perspectives on the work environment. The main questions addressed in this chapter are:

- What are the differences in occupational expectations between the interviewees in Japan and the UK?
- How different are the parental effects on their occupational expectations?
- How different are the interviewees' perspectives for WLB that affect their occupational expectations?

The next sections present the research method, followed by a discussion on the results of the interviews. The final section summarises the findings, lists the limitations of the study, and offers some forward-looking conclusions.

Method

Interviews were conducted with 27 participants from Japan and 21 from the UK. The procedure was as follows: Firstly, a proposal for the interview (Reference #2021-146) was submitted to and approved by the ethics committee of Ochanomizu University. Subsequently, the recruitment process employed a snowball sampling technique. A formal notification was distributed through personal and professional networks, including the OECD, where the author was employed at the time. Messages were sent to employees who were presumed to have connections with female university students in Japan or the UK. These contacts subsequently disseminated recruitment emails to female university students who were likely to have an interest in volunteering. The volunteers from the UK were students studying at various universities located between Scotland and London, primarily from the competitive Russell Group.¹¹

In the case of Japan, a considerable number of participants were enlisted through university faculty members, particularly those who were personal contacts or affiliated with an econometric study group to which the author belonged. Several faculty members played a key role by inviting their students to participate actively in the study, resulting in the recruitment of one to three students from each of their respective university departments. Consequently, several volunteers were affiliated with a national university in Kyushu, a mid-level private university in Kansai, and various competitive private universities in Tokyo. This multi-faceted recruitment strategy, leveraging personal, organisational, and academic networks, contributed to the formation of a diverse pool of potential interviewees.

The recruitment message invited interested and willing participants to complete an online form. Notably, there were no specific standards or conditions for the selection of interviewees, except that they had to be female university students in the UK or Japan. All individuals who registered and were available from December 2021 to February 2022 underwent interviews, ensuring that every eligible participant had the opportunity to participate.

The online interviews were conducted in either Japanese or English, using a pre-tested question guide that had been sent in advance. These semi-structured interviews lasted approximately an hour and a half and included questions about the participants' expectations regarding future occupations and family life, as well as information on their parents, friends, and schools. Additionally, the interviews explored their perspectives on gender-related workplace and childcare issues. As mentioned earlier, results elaborated in this chapter primarily focuses on parental influences from the micro/meso systems and workplace-related issues from the exo/macro systems that are relevant to occupational expectations.

To document the interviews, the students were asked to sign a permission form in advance. After the interviews, the transcripts were sent to them for review and approval. Extracts from the Japanese transcripts were translated into English by the author for this research. While a modest honorarium was offered to compensate for the participation time, it is reasonable to assume that participants who volunteered for this study were generally more inclined towards career pursuits and possessed insights into their career aspirations.

As a result, caution should be exercised in recognising that the sample's characteristics may not fully encompass the entire spectrum of perspectives within all female university students in Japan or the UK. Nevertheless, this study's comparison of gender-related influences on occupational

¹¹ The 24 universities of Birmingham, Bristol, Cambridge, Cardiff, Durham, Edinburgh, Exeter, Glasgow, Imperial College, King's College, Leeds, Liverpool, London School of Economics, Manchester, Newcastle, Nottingham, Oxford, Queen Mary, Queen's Belfast, Sheffield, Southampton, University College London, Warwick and York.

expectations among females interested in the topic between Japan and the UK is akin to a like-with-like comparison. The findings should be interpreted within the context of the study's goals, the inherent biases associated with self-selecting samples, and to recognise potential limitations in generalising to the broader population of female university students in these countries.

The analysis for this qualitative research was conducted using a methodology outlined by Sato (2008). Information was systematically coded to facilitate data reduction, conversion into numerical formats, and quantification. A combination of deductive and inductive approaches was employed, considering existing theories, other surveys, and quantitative data related to parental influence on daughters' occupational choices. Cases were assembled to construct code matrices based on gender-related patterns. Ultimately, the matrices for Japan and the UK were compared to identify any similarities or differences, thereby shaping the narrative.

Profile of the Interviewees

Table 6.1 displays profiles of the 27 interviewees in Japan, including their majors, university categories, cities they grew up in, and expected occupations matched with ISEI scores based on the closest ISCO code. It also provides information on their parents' education, occupations, and ethnic background if at least one was non-Japanese. In total, these interviewees were attending 16 universities spanning from Hokkaido to Kyushu.

To approximate academic ability, universities are classified into five types and grouped into three categories: Former Imperial or competitive private¹² (11), other national (seven); and other private or public (nine), with competitiveness generally descending in that order. Among the interviewees, 17 were pursuing bachelor's degrees, nine were master's students, and one was a doctoral candidate, with ages mostly ranging from 18 to 29. Their academic majors varied widely, encompassing fields such as economics, law, art, history, and molecular biology.

There was some cultural diversity among the interviewees in Japan. While most of them had Japanese parents and grew up in Japan, one interviewee was born and raised in Japan but had Indian parents. Another grew up in the USA with a Japanese mother and an American father. A third interviewee, with Japanese parents, had lived in a foreign country and attended international schools both abroad and in Japan. This diversity reflects Japan's increasing internationalisation, which is an important aspect to consider for the study, although it also adds complexity to the cultural interpretation of the findings.

Table 6.2 presents the profiles of the 21 interviewees in the UK, who were enrolled in 12 universities spanning from Scotland to Southeast England. The universities are categorised into two groups: Ancient (seven) and others¹³ (14), with the former typically known for higher competitiveness. Among these interviewees, 13 were pursuing bachelor's degrees, four were master's students, and four were doctoral candidates, with ages ranging from 18 to 27. The academic majors varied, with some specialising in the sciences such as biology or neuro-immunology, while others pursued fields such as education and political science.

The cultural backgrounds of the interviewees on the UK side show significant diversity. Among the 21 students in the UK, 12 or 57% grew up in the country. Of these students, 10 students or 48% had at least one British parent, and seven students or 33% had parents who were both British (or Irish). The other 9 students did not grow up in the UK but mostly in Europe and attended international schools. They had one or two parents of different nationalities, primarily

¹² Competitive Private includes Waseda, Keio, and Sophia, commonly known as "SOUKEIJOU".

¹³ "Ancient" includes Universities of Oxford, Cambridge and Glasgow. "Others" are mostly Russell Group universities.

from Europe or East Asia, including Italy, Portugal, Hungary, Ukraine, Japan, Hong Kong, Taiwan, or a mix of these nations.

Table 6.1: Profile of the Interviewees in Japan

ID	Major	University Group	Course	Year	Age	Expected Occupation	ISEI	Father			Mother			Parents' background
								Education	Occupation	ISEI	Education	Occupation	ISEI	
J1	economics	other private	bachelor	3	20	tax official	67	technical school	business & admin associate	58	technical school	factory worker	18	
J2	social welfare	other private	bachelor	4	22	social worker	53	bachelor	stationary plant operator	23	bachelor	cosmetics researcher	59	
J3	arts	national	master	2	24	digital background artist	57	bachelor	announcer	54	junior college	real estate agent	62	
J4	microbiology	national	master	2	24	sales professional	74	doctorate	medical doctor	89	bachelor	housewife	17	
J5	history	competitive private	master	1	23	editor	74	master	business & admin professional	74	bachelor	administration associate	58	
J6	regional economics	other private	bachelor	4	22	3D graphic designer	57	high school	security guard	24	high school	housewife	17	
J7	law	competitive private	law school	3	24	business lawyer	87	master	business service & admin manager	72	bachelor	CEO of a company	75	
J8	international politics	competitive private	bachelor	4	22	sales professional	74	bachelor	marketing & development manager	74	bachelor	childcare worker	25	
J9	economics	competitive private	bachelor	3	21	international organisation professional	73	bachelor	research & development manager	82	bachelor	housewife	17	
J10	economics	competitive private	bachelor	2	19	financial/data analyst	76	bachelor	industrial production engineer	79	master	secondary school maths teacher	82	Indian mother and father
J11	project management	other private	bachelor	4	22	banking associate	60	bachelor	business & admin professional	74	technical school	X-ray technician	57	
J12	international development	national	master	1	29	aid worker	71	bachelor	gardener	21	bachelor	primary school teacher	76	
J13	Spanish	other private	bachelor	4	22	business associate professional	63	bachelor	mechanical engineer	77	junior college	administrative assistant	43	
J14	gender and social science	national	master	1	24	certified accountant	77	bachelor	secondary school teacher	82	bachelor	building architect	80	
J15	food management	other private	bachelor	4	22	non-profit organisation co-ordinator	53	high school	retail manager	52	high school	teacher's aide	25	
J16	economics	competitive private	bachelor	2	21	certified accountant	77	bachelor	ICT manager	79	bachelor	administrative assistant	43	Japanese mother and American father
J17	medical science	national	medical school	3	20	specialist medical doctor	82	doctorate	social professional	77	bachelor	admin professional	74	
J18	international cultural exchange	other public	bachelor	4	22	aid worker	71	master	psychologist	86	bachelor	housewife	17	
J19	economics	national	bachelor	1	18	business associate	60	technical college	science and engineering associate	52	junior college	cashier	31	
J20	nursing	other private	master	1	35	community health worker	53	high school	restaurant manager	44	high school	waiter	25	
J21	economics	competitive private	bachelor	2	19	international organisation professional	73	doctorate	medical doctor	89	bachelor	secondary school teacher	82	
J22	literature	former imperial	doctorate	3	29	university teacher	85	doctorate	university teacher	85	doctorate	university teacher	85	
J23	business management	national	bachelor	1	18	admin associate	60	bachelor	tax official	67	bachelor	teacher's aide	25	
J24	international education	competitive private	master	1	27	aid worker	71	bachelor	manufacturing manager	65	master	housewife	17	
J25	law	competitive private	law school	2	24	business lawyer	87	bachelor	civil engineer	70	bachelor	administrative assistant	43	
J26	law	competitive private	bachelor	4	21	legal professional	81	bachelor	business service manager	72	bachelor	secondary school teacher	82	
J27	economics	other private	bachelor	3	20	administrative assistant	43	high school	business admin associate	58	high school	administrative assistant	43	
Average							69			66			47	

Table 6.2: Profile of the Interviewees in the UK

ID	Major	University Group	Course	Year	Age	Expected Occupation	ISEI	Father			Mother			City Raised	Parents' background
								education	occupation	ISEI	education	occupation	ISEI		
UK1	medical science	Other	medical doctor	2	20	specialist medical doctor	82	bachelor	software engineer	64	bachelor	journalist	73	London	Japanese mother and British father
UK2	education	Other	bachelor	1	18	secondary schoolteacher	82	bachelor	financial professional	73	bachelor	housewife	17	Brussels, Milan	Japanese parents
UK3	social science	Other	doctorate	1	24	university teacher	85	bachelor	gardener	21	master	Cleaner	15	Eastly	British parents
UK4	biology	Ancient	bachelor	3	20	biologist	81	bachelor	airline pilot	74	bachelor	tour guide	47	Surrey	Japanese mother and British father
UK5	education	Other	bachelor	1	18	elementary schoolteacher	76	bachelor	director of international packaging company	72	high school	housewife	17	Ukraine, Italy, etc.	Ukrainian parents
UK6	cancer research	Ancient	master	1	24	cancer researcher	81	master	independent day trader	61	master	Journalist	73	Waterloo	Japanese mother and Belgian father
UK7	neuro-immunology	Other	doctorate	1	27	neuro scientist	81	bachelor	tree cultivator	21	high school	cleaner	15	North of London	British parents
UK8	biology	Other	bachelor	2	19	cancer researcher	81	bachelor	architect	80	bachelor	statistician	76	Saint-Germain	British Pakistani/ German mother and Italian/ American father
UK9	Arabic/ Portuguese	Other	bachelor	1	19	documentary maker	63	bachelor	banker	76	bachelor	primary school Latin teacher	74	London	Italian parents
UK10	international relations	Ancient	master	3	23	think tank researcher	83	master	director of chemical company	71	bachelor	housewife	17	Hong Kong, Shanghai	Taiwanese mother and Belgian/ Spanish father
UK11	economic geography	Other	doctorate	3	27	researcher	83	law	lawyer	81	bachelor	financial officer	55	Brussels	Portuguese parents
UK12	biochemistry	Other	bachelor	1	19	biochemist	81	master	stay at home father	17	master	human resource specialist	75	Former Socialist Country, Luxembourg	Parents from a Former Socialist country
UK13	law	Ancient	law degree	1	21	barrister	87	doctorate	software modeller in insurance company	75	master	airline logistics specialist	75	Surrey	British parents
UK14	Korean studies	Ancient	master	1	22	academic	83	bachelor	actuary	58	vocational school	massage therapist	27	London	Japanese mother and British father
UK15	politics	Ancient	bachelor	3	20	diplomat	79	high school	army officer, security company owner	52	bachelor	Russian teacher, city council worker	69	Norfolk	British parents
UK16	psychology	Ancient	bachelor	3	21	elementary schoolteacher	76	high school	lorry driver	26	master	elementary schoolteacher	76	Liverpool	British parents
UK17	anthropology	Other	bachelor	2	19	museum curator	77	high school	firefighter area manager	46	high school	teacher's aide in primary school	25	South Wales	British parents
UK18	neuro-immunology	Other	doctor	1	25	neuro-scientist	81	master	electrical engineer	81	master	solicitor	87	Northern Ireland	Irish mother and British father
UK19	education	Other	bachelor	1	20	elementary schoolteacher	76	high school	restaurant owner	44	bachelor	housewife	17	Budapest	Hungarian parents
UK20	nutrition	Other	bachelor	2	23	community worker	53	bachelor	financial professional	73	bachelor	administrative assistant	43	Nagoya	Japanese parents
UK21	political science	Other	bachelor	2	21	financial consultant	76	high school	furniture business owner	52	high school	housewife	17	Birmingham	Hong Kong Chinese parents
Average							78			58			47		

While the diverse ethnic composition of the sample presents challenges for cultural interpretation, it mirrors the contemporary demographic landscape of the UK, where 22% of undergraduates in the UK were international students in 2022 (Universities UK 2022). A more in-depth examination of responses to the PISA 2018 questionnaire regarding the backgrounds of UK students reveals that, among female students aspiring to attend university, 30% report having at least one parent born in a foreign country. If this proportion is reflective of the broader population of university students who attended UK high schools, and considering that 22% of undergraduates come from abroad, it suggests that nearly half of female university students in the UK may have one or both parents from a foreign country. While acknowledging the complexity of representation, this implies that the interview sample, despite its inherent challenges, may capture certain aspects of the UK's demographic diversity relevant to this analysis.

Occupational Choice

Regarding occupational choices, on the Japan side, several interviewees were planning to become graphic designers, social workers, lawyers, and aid workers. Only one interviewee indicated an interest in becoming an administrative assistant – an occupation equivalent to the most popular choice in the PISA sample – possibly because this type of occupation is increasingly becoming temporary and low paid (Ueno 2021, Yamada 2016).

Other interviewees were considering the types of organisations they wished to work for first, prioritising stability or better working conditions, and then selecting specific occupations, such as becoming a tax officer. Meanwhile, a few were leaning towards certified occupations – a popular choice among Japanese females seeking job security or flexible workhours – like becoming a certified accountant. Overall, the average ISEI score of the interviewees' expected occupations is 69, which is higher than the average of 59 in the PISA sample among high school girls who planned to go to university.

At the same time, the interviewees in the UK display higher levels of ambition compared to those in Japan. Several expected to become laboratory scientists, academics/researchers, or teachers, while others had plans of becoming a doctor, barrister, diplomat, or financial consultant. Some of these occupations align with the popular ones in the PISA sample, including lawyers (barristers), medical doctors, teachers, and biologists. The average ISEI score of the interviewees in the UK is 78, which is higher than that of the interviewees in Japan, but lower than the average of 82 in the PISA sample.

The primary distinction between the two countries is observed in the field of STEM occupations. In Japan, only one interviewee, J17, a medical student, was pursuing a STEM occupation, which typically offers higher wages and greater prestige. While this discrepancy could be influenced by the sample selection, it aligns with Japan's low representation of females in STEM fields compared to other OECD countries. According to the OECD, the share of female graduates in STEM fields in Japan is merely 17%, marking the lowest figure among developed countries, a significant contrast to Poland's 42% (OECD 2022c). Similarly, the UK has a 24% share of females in STEM, which is below the OECD average of 29%, but still higher than Japan. The underrepresentation of females in STEM fields is frequently attributed to gender stereotypes (Adachi 2022; Ikkatai *et al.* 2021; OECD 2021, 2022c; Nagamachi 2021; Sikora & Pokropek 2011).

Except for the medical student, none of the other 10 interviewees in Japan who liked science or maths as subjects recalled being specifically encouraged by their parents or schools to pursue a STEM field, nor did they perceive that society was actively promoting females in STEM. Even the two other interviewees who were enrolled in science courses were contemplating dropping out. For instance, J15, a food management major, and J4, a master's student majoring in microbiology, actively sought and had already received offers for non-STEM occupations that would not necessarily require their scientific knowledge.

In contrast, eight interviewees in the UK were expecting to work in STEM fields. While not all of their parents actively recommended STEM careers, five interviewees within the entire sample had parents who, at some point, encouraged them to pursue careers in the sciences. Additionally, four interviewees mentioned that their schools were urging female students to take up STEM fields. Two of them stated:

...when I was in school, there was a whole movement for women in STEM....I'll go to the hospital or I'll go into my lecture halls, it is almost female dominated. So I knew that when I got into the workplace, those movements would have taken such hold that I wouldn't necessarily feel pressured by those patriarchal standards of work work work or nothing (UK1, a medical student).

There was a lot of workshops for women in STEM because there's a big drive for that, essentially in England. They are trying to fix the gender gap. I remember going to those, thinking, what on earth is this rubbish, why do they need a Women in STEM Day, when men are just as important. In other words, it wasn't as apparent that there was a divide to me when I was younger. Because I'd always thought that, yes, I can go into whatever I wanted to go. By 13, I already knew that I probably wanted to do science (UK4, an aspiring biologist).

In the UK, the proportion of females among new entrants in the STEM field at the bachelor's level is 31%, which is higher than Japan's rate of 18%, the lowest among OECD countries (OECD 2022a). On the other hand, Japanese girls consistently perform exceptionally well in maths and science on PISA tests. For instance, among those in the PISA 2018 sample who planned to go to university, Japanese girls rank second highest in both science and maths among OECD countries. In contrast, females in the UK rank 15th in maths and 9th in science. This indicates that in Japan, despite the competence in STEM subjects, females are less likely to pursue STEM careers, leading to the underutilisation of valuable human capital.

In sum, the results indicated that interviewees in the UK generally held higher occupational expectations than those in Japan, with many anticipating careers in STEM fields. While several opted for traditionally female-dominated occupations, such as teaching, others chose lab or research-related roles that are progressively becoming female-dominated in the UK, along with those that remain male-dominated, like doctors or barristers. In Japan, most interviewees did not necessarily gravitate towards typically female-dominated occupations. Several of them expected to become digital artists, lawyers, aid workers, and international organisation professionals. However, when asked if they would have chosen different occupations had they been born as boys, a few admitted that they would have aimed higher, a viewpoint not observed in the case of the UK.

Results and Discussion: Analysis of Factors

With the profiles of the interviewees provided above, the following sections examine factors related to their occupational expectations. They are broadly divided into three: preferences for future partners (individual characteristics), parental influence (micro/meso systems), and perspectives on WLB (exo/macro systems).

It is important to note that the interviews covered a diverse range of additional subjects, particularly on the significant influence of peers (Duncan *et al.* 1968; Picou & Carter 1976; Soldner *et al.* 2012; Coppé 2020; Matsumoto 1995) and career support (Gottfredson *et al.* 1975; Soldner *et al.* 2012; Whiston *et al.* 2017; Adachi 2004; Terasaki 2008) on the occupational or career aspirations of young individuals, as underscored by literature. Moreover, observing the distribution of childcare responsibilities between parents can potentially influence young

women's preferences for the division of household responsibilities with a potential partner, WLB and career aspirations. This, in turn, may shape their views on the extent to which they would be willing to align their social status with that of their future partner.

However, to prioritise and focus on the most impactful issues, these aspects are not extensively detailed in this section. In particular, while they play a crucial role in understanding the evolution of career aspirations, their direct influence on the selection of specific occupations was not conclusively determined. Additionally, although effective child rearing or the potential academic success of children may be an essential aspect of a mother's social status (Nishimura, 2001), its relevance to young females who may or may not have children in the future was considered tentative. These areas warrant further in-depth exploration in subsequent research endeavours.

Preferences for Partners

Chapter 1 elucidated that Japanese women, particularly those who are not employed, frequently depend on their social status relative to that of their husbands. However, it also demonstrated that the situation may be evolving as more women opt to advance their careers even after childbirth. Consequently, questions were presented to the interviewees to assess the Social Status Dependency theory concerning their preferences for future partners in relation to their occupational and career expectations.

In short, the majority of interviewees in Japan did not strongly align with the Status Dependency Model, akin to the interviewees in the UK. This misalignment may be attributed to the biased sample, given that the interviewees comprised female university students who volunteered for the interview, potentially making them more career-oriented than the average Japanese female. This section nevertheless briefly compares partner preferences among interviewees in both Japan and the UK, even though it may not significantly contribute to explaining why Japanese females have relatively low occupational expectations. It highlights that the interviewees in the UK were even more independent-minded than those in Japan, potentially raising the former's occupational expectations.

Interviewees in Japan

Approximately 93% of the interviewees in Japan expressed a desire to marry and/or have children in the future. However, there were exceptions, including a student who had graduated from a competitive private university and had secured a position in marketing at a major bank and another attending a national university with an expectation of becoming a business associate or certified financial planner. It is possible that these individuals chose their occupations with the assumption that they would not rely on a future husband due to their lack of interest in marriage. Nonetheless, these family aspirations did not appear to significantly influence the students' specific choices for occupations.

When it comes to their preferences for future partners, approximately 70% of the interviewees indicated that their prospective husband's income would not be a decisive factor for them. For instance, J15, an aspiring social worker, emphasised, 'Income is not important at all. What's important is someone I can talk to.' Similarly, J23, who aspired to be an administrative associate, remarked, 'Income is not so important. I intend to work, so if he doesn't work, I'll have to work.' Most interviewees expressed that their own career held greater importance than that of their future partners.

On the other hand, there were a few interviewees who anticipated modifying their occupational expectations with the anticipation of finding a partner who could provide sufficient income. For instance, J4, who had secured a marketing position with a publishing company and came from a family where her mother was a contented housewife and her father was a doctor, stated:

My salary will be an average of a salaryman, but I have no intention of providing for the family. If my future husband has significant income and the living situation is comfortable, I think that staying at home without working is an option..... But even if I stay at home and take care of the children, I want to do something that uses what I've learned. For example, I've studied nutrition for a long time, and I even have a qualification as a nutritionist. So I want to work on sharing knowledge with others. I'd like to develop some business than being employed.

However, this is an exceptional case, with 78% of the interviewees expecting their partners to share household chores and childcare responsibilities, recognising the trade-offs between domestic work and career (Miura 2015; Moriizumi & Nakamura 2021; Yamada 2016). A few even said that their preference for partners who would do household chores was more or as important as their educational credentials or income. It is worth noting that those who preferred their partners to take on more household responsibilities were not necessarily aspiring to pursue ambitious occupations. Conversely, those who were comfortable with their future husbands spending less time on household responsibilities were not necessarily aiming for less demanding occupations. Either way, since the degree to which a future husband would undertake household responsibilities remained uncertain, this factor did not significantly influence the interviewees' occupational choices.

In summary, although the Status Dependence theory had been put forth as a hypothesis to explain the low occupational expectations of Japanese females, the findings suggested that most interviewees in Japan did not strongly demonstrate a reliance on their future husbands for their social status. This departure from the theory could partly be attributed to an evolving paradigm as more women choose to advance their professions. Furthermore, given that attributes of future partners, such as income, education, occupation, and their role in household chores, were unpredictable for most interviewees, it seems that speculation did not significantly influence their choice of occupations.

Interviewees in the UK

In the case of the UK, more than 70% of the students expressed a preference to have both a partner and children in the future. However, there was an Eastern European student who wanted a partner but not children. Her perspective was influenced by her observation of her father sacrificing his career for her mother's, a situation she believed might not have occurred if there were no children involved. Additionally, a few students in the UK expressed a wish for children but not necessarily a partner, reflecting a greater acceptance of single motherhood in Europe compared to Japan. These students aspired to a range of occupations, including primary and secondary school teachers, laboratory scientists, and social science researchers. Evidently, these interviewees did not appear to be primarily focused on depending on their future partners' income or status.

In fact, in England and Wales, more than half of births now occur outside of marriage (ONS 2023c), a rate significantly higher than the 2% reported in Japan, according to the Vital Statistics (MHLW 2023). In this respect, about 13% of households are headed by lone mothers in the UK (ONS 2023d), while the rate is lower at 8% in Japan (MIC 2022). In addition, according to YouGov, an internet-based market research company, while 6% of women were entirely financially dependent on their partner and 29% were somewhat dependent, 48% responded that neither was dependent on each other, and 10% responded that their partners were dependent on them. While no gender breakdown is given, the proportion of those who responded that neither was financially dependent on each other was 52% for 25-34 year olds, 45% for 35-44 year olds, and 52% for 55 years and older (YouGov 2021a). These data suggest that females in the UK from all cohorts are likely to be earning a living independently from males including to support their

children. This is in contrast to their counterparts in Japan, who are more dependent on males in this regard.

In terms of partner preferences in the UK, an estimated 63-68% of women were comfortable with having a romantic partner whose income, ambition, or success was much less than hers, respectively¹⁴ (YouGov 2018). Furthermore, 95% of women and 92% of men responded that it is good for women to make a career of their own (YouGov 2021b). Being aware of this trend, young females in the UK may anticipate greater autonomy in their family lives, potentially influencing their perspectives on parenting, income sources, careers, and occupational choices.

In this context, several interviewees in the UK preferred their future partners to have occupations to fit their occupational life. This is particularly the case where the interviewees were aspiring to take up occupations that are generally considered prestigious.

I don't know if my partner's going to be a doctor or not. And there is a saying in medicine that doctors should not marry doctors, simply because our lifestyles are so busy, therefore the children get neglected. So I think, in my mind ideally, my partner would be able to fill in to the gaps I can't manage (UK1, medical student).

I would probably like to stay on the move a bit throughout my youth. So if I'm in the Foreign Office, I wouldn't be too worried with the children. It would be the husband, and I hope that he can either work remotely or do small jobs that can be flexible and not rooted in one place (UK15, aspiring diplomat).

Moreover, some interviewees expressed the view that having a stay-at-home parent is beneficial, but that they envisioned their future partner taking on this role rather than themselves. UK10, aspiring academic, said:

I wouldn't mind, for example, having a stay-at-home husband...I think it would depend on who is earning more. I grew up in a family where there was a stay-at-home parent, and I think that it worked out really well..... But on an egotistical level, I want to have my own career and I don't know if I want to sacrifice that for someone else.

In terms of expecting their partner to carry out household chores, the interviewees in the UK were much more vocal and demanding than the interviewees in Japan, with around 90% considering it as very important. Furthermore, most of them talked about 50/50 and sharing equally, which was the not case in Japan.

...in terms of housework, ideally split half and half. I never really agreed with the whole, your partner is "helping" you do the housework. I don't think it should be a matter of help. I think it should be like, you have your part and I do mine..., especially in terms of children's activities.....I just think it's wrong that that role is assigned automatically (to women). So definitely split half and half (UK9, aspiring documentary maker).

In summary, the majority of UK interviewees expressed a desire to have both a partner and children in the future. However, their preference did not necessarily involve depending on their future partners' income or status. Some were even considering raising children without having a partner, indicating a greater acceptance of single motherhood and women's financial independence. Additionally, a few interviewees envisioned their future partners accommodating their career ambitions or taking on the role of a stay-at-home parent. Furthermore, many emphasised the importance of their partners equally sharing household chores and childcare

¹⁴ Assuming that gender distribution of total respondents and those who answered "don't know" were equal.

responsibilities to enable them to focus on their careers, challenging the automatic assignment of these tasks to women.

Influence from Parents

Chapter 1 elaborated on how parents can play a pivotal role in shaping the occupational expectations of youths, including girls. From an early age, children observe and absorb information about various occupations and careers within their immediate environment. Parents' occupations, work styles, and achievements shape the child's perceptions and attitudes towards work and potential occupations. Moreover, parental expectations, encouragement, guidance, and support contribute to the development of educational and career goals. In the case of girls, the role of parents becomes even more critical, as they can either encourage their daughters to align with traditional gender norms by pursuing female-dominated occupations or empower them to aspire to a wider range of professions, cultivating ambitious occupational expectations.

The influence of parents on the interviewees' occupational expectations is categorised according to Kanai's (2007) classification as follows:

- **Environment: effects of social class**, represented by the education and occupations of the parents;
- **Direct effects: encouragement by the parents;** and
- **Indirect effects: mothers as role models.**

The following sections present each category.

Environment: Effects of Social Class

This section focuses on the influence of social class – generally represented by parents' educational and occupational levels – on the occupational expectations of interviewees. In the case of Japanese girls, analysis in Chapter 3 showed that the occupations of fathers and mothers in the PISA 2018 sample significantly influenced their ISEI scores. However, for British girls, Table 3.4 shows that neither the education nor the occupation of the parents had any significant effect. Therefore, this section seeks to explore whether these patterns are mirrored among the interviewees in both Japan and the UK, providing insights into the relationship between social class and occupational expectations of females.

Interviewees in Japan

Among the interviewees in Japan, 78% of the fathers had at least a bachelor's degree. The occupations ranged from plant operator, restaurant manager, security guard, secondary teacher, and IT manager, with an average ISEI score of 66. Fathers with ISEI scores above 80 included a medical doctor, research manager, and a psychologist.

Regarding mothers, while 67% had at least a bachelor's degree, about 75% had left work around childbirth. Subsequently, after the children became older, most of these mothers took up some occupation – a typical M-curve employment pattern in Japan (MIC 2022). No distinct feature is discernible in the occupational SES of those who had quit and those who continued – e.g., the architect and the childcare worker stopped working, while the university teacher and restaurant worker continued. The latest occupations of the mothers ranged from factory worker, cashier, child minder, to secondary school teacher, while five remained as housewives. The occupations of four mothers – secondary school teachers, an architect, and a university teacher – had ISEI scores above 80. The average ISEI score of all mothers' occupations is 47, or 54 excluding housewives.

To investigate the potential impact of parental social class and the factors outlined in Chapter 3 on the ISEI scores of expected occupations, Table 6.3 classifies the interviewees into three distinct groups based on their ISEI scores. These groups consist of the highest (76-87), high (66-75), and

moderate (43-65) ISEI score categories. An attempt is made to evenly distribute the interviewees among these groups, considering the breaks between the ISEI scores. As it is not feasible to directly assess their mathematical competence or general academic aptitude, the categorisation of universities is utilised as a proxy. They are divided into (a) Former Imperial or competitive private; (b) national¹⁵; and (c) other (public or private), with competitiveness generally decreasing in that order. Additionally, the table presents information on the percentage of fathers and mothers with at least a bachelor's degree and the average ISEI scores associated with their respective occupations.

Table 6.3: University Grouping and Parental Social Class by ISEI Scores of Interviewees in Japan

ISEI of Interviewee's Expected Occupation	n	Academic Aptitude			Father		Mother	
		(a) Former Imperial of Competitive Private	(b) National	(c) Others	% with at least Bachelors	ISEI	% with at least Bachelors	ISEI
Highest	8	75%	25%	0%	100%	77	100%	71
High	9	56%	22%	22%	89%	71	89%	36
Moderate	10	0%	30%	70%	40%	53	20%	39

Source: Author

Analyses of the factors reveal correlations between the ISEI scores and the competitiveness of universities, as well as the average education level and ISEI scores of the fathers and mothers. Specifically, the group with the highest ISEI scores exhibits the largest proportion of individuals from (a), with fathers and mothers holding at least a bachelor's degree, along with the highest average ISEI scores of their occupations. Conversely, the group with moderate ISEI scores displays the opposite pattern.

The only exception is that the ISEI score of the mother's occupation of the high ISEI score group exhibits a slightly lower score than the moderate ISEI score group. This discrepancy may partly be attributed to the inclusion of four housewives in the High ISEI score group, for whom an ISEI score of 17 is assigned, following the methodology of the OECD for PISA. Although the analysis in Chapter 3 indicated a strong correlation between occupational expectations and the mother's ISEI score, the academic literature presents a more varied perspective, as explained in Chapter 1.

Nevertheless, it can be concluded that, in general, the findings suggest the presence of a social class effect on the occupational expectations of the interviewees in Japan. However, as explained in Chapter 1, this itself is not the primary focus of this study. Conversely, if interviewees from higher social classes did not demonstrate elevated occupational expectations, despite possessing stronger academic aptitude and greater educational investment, this could be seen as a significant loss of potential productivity and a societal concern.

Interviewees in the UK

Among the interviewees in the UK, 76% of the fathers held at least a bachelor's degree, which is similar to the proportion of fathers on the Japanese side. The occupations of the fathers on the UK

¹⁵ Those excluding Former Imperial universities.

side ranged from lorry driver, firefighter, restaurant owner, architect, electrical engineer, to banker, with an average ISEI score of 58, somewhat lower than the average ISEI score of the fathers in Japan. Those with scores above 80 included an architect and an electrical engineer. Regarding mothers, 76% held at least a bachelor's degree, which is higher than the proportion of mothers in Japan. This aligns with the historically higher proportion of females in the UK going to university after high school compared to females in Japan, until recently. However, since two-thirds of the mothers did not grow up in the UK, this factor may not be so relevant.

Nonetheless, similar to the Japanese side, about 75% of the mothers had intermittent career patterns when the children were young. Here, the mothers who continued their careers tended to be those with relatively high occupational ISEI scores, such as solicitor, statistician, human resource specialist, and elementary school teacher. Other recent occupations of the mothers range from nursery teacher, tour guide, cleaner, journalist, to financial officer. Additionally, there were five housewives, but from Japan, Taiwan, Hong Kong, Ukraine, and Hungary – cultures known to be traditional in gender roles. On average, the ISEI score of the mothers in the UK is 47, or 53 when considering only working mothers, very similar to the mothers in Japan. The one mother who has an ISEI score above 80 was a solicitor.

The case of the UK also exhibits some parallels with Japan regarding the transmission of social class. Table 6.4 classifies the interviewees into three groups based on their ISEI scores, encompassing the highest (82-87), high (79-81), and moderate (53-77). Since the distribution of ISEI scores among the UK interviewees tend to concentrate more towards the higher end than in Japan, the groupings are not identical. Nevertheless, an effort is made to achieve a balanced distribution, taking into account the breaks between the ISEI scores, to facilitate comparisons of the effects of factors among the UK groups and not with those in Japan. Regarding universities, they are categorised as (a) Ancient, representing the top-level institutions in the UK, and (b) others, primarily consisting of Russell Group universities that are also considered competitive. Unlike Japan, where three groups are used, the UK is divided into two groups, as further disaggregation of group (b) based on academic prestige is challenging.

Table 6.4: University Grouping and Parental Social Class by ISEI Scores of Interviewees in UK

ISEI of Interviewee's Expected Occupation	n	Academic Aptitude		Father		Mother	
		(a) Ancient	(b) Others	% with at least a Bachelor	ISEI	% with at least a Bachelor	ISEI
Highest	7	43%	57%	100%	63	86%	40
High	7	43%	57%	86%	55	86%	63
Moderate	7	14%	86%	43%	56	57%	38

In the UK, the relationship between ISEI scores, academic aptitude, and social class is somewhat more complex than in Japan, but there are still notable correlations. The highest ISEI group tends to have higher values in all aspects compared to the moderate ISEI group. However, some exceptions are present; the share of interviewees in category (a) is the same between the highest and high groups, the father's ISEI score is slightly higher in the moderate group than in the high

group, and the mother's ISEI score is significantly higher in the high group. This discrepancy may be partly due to the narrow range of ISEI scores in the high group, which could be merged with the highest group for a more consistent analysis.

The UK is often characterised as a class-based society, where studies have shown that, since the early 2000s, students from high-income households are much more likely to attend university than those from low-income backgrounds (Department for Education 2022; Pan 2022). In particular, research by Ro *et al.* (2022) reveals that students whose parents hold university degrees have a 77% higher chance of pursuing STEM subjects at a Russell Group university when compared to students with non-university-educated parents. Nevertheless, the analysis suggests that the social class transmission effect is significantly stronger in Japan than in the UK.

To explain the possibly smaller transmission effect of social class in the UK, there could be other societal factors at play that could be mitigating the impact. For instance, initiatives promoting females in STEM fields may provide opportunities for females from diverse backgrounds to aspire to high-status occupations. Another possible factor that contributes to raising females' occupational expectations in the UK is the financial support for students to pursue higher education. In fact, all the British interviewees were taking advantage of the government's Tuition Fee Loan, which is made accessible to all UK home (national or resident) students, irrespective of household income. All these interviewees expressed satisfaction with this system. Nonetheless, since the social class transmission is not the primary focus of this study, as explained in Chapter 1, the discussion regarding strategies to encourage females from lower socioeconomic backgrounds to pursue challenging occupations will be deferred to future research topics.

Direct Effect: Parental Encouragement

Parents exert significant influence over their children's occupational expectations, impacting them through encouragement and the reinforcement of traditional gender roles. They assume a crucial role by providing guidance, motivation, and advice, which can enhance their children's confidence and determination to pursue particular career paths. However, in the case of daughters, parents can also impose traditional gender norms, dissuading them from aspiring to high-prestige careers and emphasising the role of caregivers (Maeda 2017).

While a quantitative analysis of parental encouragement is not conducted, the literature review in Chapter 1 indicates that parental support, especially for non-traditional careers, including those in STEM, can have a positive influence on girls' career aspirations. Alternatively, it is also observed that, in Japan, parents frequently guide their daughters towards occupations in education, healthcare, or the public sector, which are traditionally female dominated.

Therefore, this section summarises the findings from the investigation into whether these tendencies are evident among the interviewees in both Japan and the UK, providing further insights into how parental encouragement related to gender-based roles impact career expectations. The highlight is on the most contrasting responses given by the interviewees, while a summary of other responses is included in Appendix 6A, presented in Table 6.5 for Japan and Table 6.6 for the UK.

Interviewees in Japan

In the case of Japan, approximately nine interviewees had parents who adopted a *laissez-faire* attitude or were supportive of their choices. However, for most parents, there was some preference regarding their daughters' careers, with a strong emphasis on employment stability and income. Notably, seven interviewees had parents who encouraged them to pursue careers in the public sector or large corporations, aligning with Japan's employment practices, where such entities tend to hire generalists, as elaborated in Chapter 1. For example, J5, who aspired to become an editor, perceived her father's expectations as follows:

...something that's somewhat solid, for example, a job at a large corporation than a venture, or the public sector where there's stability.

Alternatively, some parents encouraged the interviewees to acquire certain certifications without specifying a particular occupation. For instance, J20, who was planning to be a community worker while currently working as a nurse, mentioned that her father observed numerous instances of women who were unable to leave their partners even when they wanted to do so.

My father always said it's better to have a qualification.... With some skill, I can be independent and not be reliant...if there's trouble....

A notable observation is that, in Japan, most parents were not necessarily encouraging the interviewees to aim for the more prestigious occupations or positions, such as career officials or management roles in companies. The exception was the case of J17, who felt pressured by her family to become a doctor. On the opposite end of the spectrum, some interviewees had parents who actively discouraged them from setting high career expectations. For instance, J27, who planned to become an administrative assistant while studying economics, received advice from her father to pursue a role as an office clerk, particularly since she did not mind routine tasks like word processing.

Moreover, 11 interviewees expressed that if they had been born as boys, they believed their parents or grandparents would have encouraged them to attend a more competitive university and pursue a stable or prestigious job. For instance, J4, who aspired to become an editor in a publishing company, shared the following:

If I were a boy, I think my father would have expected me to take a preparatory year off to study and go to a national university. Then become a national civil servant and have a so-called solid career.

Others mentioned that their parents had lower expectations of them because they were females. Two of them shared:

Success for my father meant my going to a good university, work for a company, have a family and stay at home (UK20, a Japanese student attending a UK university and expecting to become a community worker).

My mother said....how about an airport ground staff?... I think my mother thought that it was good because these people appear confident and neat...She (also) said, since I'm a girl, why don't I "go to a junior college and catch a nice man. It's not necessary to earn a living". I also think that they spent more on cram schools for my older brother (J19, aspiring-business and administrative associate).

Despite having lived in Europe all her life, UK2, who aspired to become a teacher, mentioned the views of her Japanese parents:

.....it's deemed that the man will bring the income, especially in Japanese society's perspective and viewpoints. So I think that if I were born as a boy, they would have put much more emphasis on how I can take care of my family financially.

Some girls were also discouraged from taking a year off to reapply the following year, especially to accommodate their brothers, when university fees or living costs posed a burden for the family. J23, who aspired to become an administrative associate, said:

I have many siblings, so it would have been difficult financially to go to a private university..... So that's why I'm at the current (national) university....If my brother wants to go into programming, I think it's better to spend money on him to go to a private or technical school....

J7, who was studying to become a lawyer, also mentioned that her friends could not afford to take a year off for preparatory studies to gain admission to a more competitive university:

During high school...if I looked around, there were friends who lowered their academic aspirations by saying, "I have a younger brother, so I have to go straight to university" or "my older brother went to a private school, so I can only go to a public university.

Hence, per Gottfredson's theory, career expectations of Japanese females can be circumscribed by the parents' devaluation of their daughters' education. This is exasperated by financial constraints in attending highly competitive private universities, especially if there are male siblings to accommodate. This is a significant constraint because, in Japan, the hierarchy of university competitiveness can shape the scope of career options and the types of organisations they can access. Unless females are admitted to the highly competitive Former Imperial national universities, the competitive private universities provide the next broad range of future job opportunities. If these options are restricted due to gender-based reasons imposed by parents, they may have little choice but to compromise by attending less prestigious public universities or more affordable private institutions, which could limit their occupational choices.

At the same time, student loans have increasingly become available through JASSO to finance university education. In fact, seven interviewees, constituting 25% of the sample of interviewees, were taking advantage of this financial option. Nevertheless, difficulties in repayment, which are becoming a social problem (Ouchi 2015), may still discourage some female students and parents from considering them as a viable option to finance university attendance (Armstrong *et al.* 2019). Consequently, they might opt for less competitive but more affordable public universities.

Aside from financial issues, some conservative parents are against daughters to live in big cities or away from home. J2, an aspiring social worker, said:

My cousin, who's a year older than me living in Yamanashi, said she wanted to go to a university in Tokyo. However, her parents and grandparents from the Yamanashi side told her that it wasn't acceptable for a girl to go to Tokyo alone. Consequently, she ended up going to a university in Yamanashi and couldn't come to Tokyo..... Perhaps there's a concern that, in Tokyo, she'll have a wild life, or, because she was the only girl among her siblings, they might not want to let go of the daughter they've raised so carefully.

And if it is not the parents, gender differentiation persists due to relatives. J13, an aspiring business associate, said:

When I was looking for a job, I was told by my grandmothers on my father and mother's sides that women should be administrative assistants. The reason is that they are easier to quit and prioritise the family.

UK1, a medical student with a Japanese mother also observed in Japan that:

...every time I say, especially to the Japanese side, "I want to be a doctor", they say, "Are you sure you want to become a doctor, not a nurse?" So I think, if I were a boy, they would have been more supportive, saying "doctor", that's great..... In terms of the English side, your career can continue after kids, and from the Japanese side, it's more, your career stops with your kids.

Certain interviewees indicated that they themselves would have set higher aspirations for themselves if they had been born as a male. For instance, J4, who had already received an offer to become a sales marketing professional and had a father who was a doctor, expressed:

I would have probably become a doctor.... If I were the eldest and a boy, I think my mother would not have been able to withstand the pressure from those around her to get me into medical school.

While emphasising the importance of their own preference for their future careers, the majority of interviewees acknowledged the influence of their parents. Therefore, when both parents and the interviewees themselves lowered their expectations due to gender, it could partly explain the lower occupational expectations of females in Japan in comparison to males. For instance, J3, planning to be a digital background artist, said that if she were a man, she would have pursued an independent career as an artist, believing that it was challenging for women to thrive in what she perceived as a predominantly male-dominated field.

If I were a man, I might have become an artist.... Perhaps it's my bias, but men are stronger, and while women can be tough, I think they are weaker in dealing with troubles. Artists have to manage on their own.

These examples align with surveys that indicate a large share of parents exert less pressure on their daughters than their sons when it comes to pursuing admission to elite universities or prestigious careers. Additionally, as explained in Chapter 3, parents generally pay more in supplementing their sons' education than their daughters' in junior and senior high schools (MEXT 2022c). This difference in treatment may stem from the belief that daughters' future social status relies on their husbands, consistent with the Dependency Model discussed in Chapter 1.

The gender-based differentiation imposed by parents may discourage young women in Japan from pursuing challenging occupations. However, it could also relieve them of the pressure to become the primary breadwinner in their future families (Maeda 2017). Consequently, while some young women acknowledge the potential risks of not earning enough for a comfortable lifestyle, they may pursue occupations they are passionate about without significant concerns about income or providing for their future children. This stands in contrast to males, who often bear the weight of being the primary earners due to the 'breadwinner bias' (CAO 2021). In this context, research by Borgonovi & Han (2020) show that the fear of failure among female students is lower in countries with greater gender inequality. This could partially explain the relaxed attitude of Japanese females towards their occupational expectations.

Interviewees in the UK

Among the interviewees in the UK, 11 stated that their parents were supportive of their career choices, but six indicated that their parents had high expectations for them, especially in terms of securing prestigious or high-status jobs, including in the STEM field. Notably, many of these mothers had at least a bachelor's degree, a prestigious occupation, or both. UK8, who was aspiring to become a cancer researcher, shared her experience regarding her mother, a statistician with a bachelor's degree working in an international organisation:

She expects me to have a very high position in an organisation. It's an income thing, but also a status thing.... Obviously, they would be really happy if I was a doctor or lawyer or something.

Or UK4, an aspiring research scientist, shared the following about her mother:

After I graduate, she wants me to have a professional job. She always wanted me to become a doctor or lawyer, or you know, the very typical things you can brag about.

Furthermore, the mother of UK18 wished for her daughter to follow in her footsteps and pursue a career as a solicitor. However, the interviewee had different plans and aspired to become a neuroscientist instead.

She has made the suggestion to become a solicitor.... She wanted me to follow her footsteps ...I think she would have liked me to have a job with high prestige, something that she would be proud to tell her friends... It wasn't good enough that I would just study science; it would have been good if I was going to be a doctor.

Despite these encouragements, only UK6, an aspiring cancer researcher, and UK12, an aspiring biochemist, were pursuing occupations that aligned with their mothers' wishes. Nevertheless, the rest of the interviewees were aiming for prestigious occupations, primarily in the field of science.

Thus, the parents of the interviewees in the UK generally held higher expectations for their daughters compared to those in Japan. Furthermore, on the UK side, very few interviewees believed that their parents' expectations for their careers would have been different if they were boys. One of the few exceptions was UK19 whose Hungarian father expressed the belief that women should handle house chores, while men should focus on working. Consequently, he would have preferred her to pursue a more esteemed job than being a teacher if she were a boy.

The interviewees in the UK themselves also did not envision choosing a different occupation if they were born as a boy. In fact, UK3, an aspiring academic researcher, believed that there was greater pressure on girls than boys to complete their education.

(My brother) hasn't finished his compulsory education... I do think there's less pressure on the boy than a girl....Even if (my sister and I) weren't finishing off our education for ourselves, we were doing it so that other people would pat on our heads .So maybe he was less expected to be people pleasing and he was more expected to follow his own wants and values.

Furthermore, UK18, an aspiring neuroscientist, mentioned that she did not believe her parents would have expected "any less" if she were a boy. This observation suggests a potential trend in the UK of expecting "more" from girls than boys, in contrast to Japan.

Indirect effect: Mother as a role model

This section discusses the indirect influence of mothers as role models for their daughters, based on studies indicating that same-sex parents are generally more influential. The quantitative analysis in Chapter 3 also revealed a stronger relationship in Japan between the daughter's occupational expectations and her mother's occupation than her father's. Accordingly, most interviewees did not explicitly consider their fathers' occupations as role models or counter-role models for their occupational expectations. Instead, they looked at their fathers as examples of what they would expect or not expect in their future partners, both as husbands and as fathers to their children.

In general, mothers can serve as influential figures for their daughters, offering real-life examples of what is possible and not possible in careers. When daughters witness their mothers excelling in their professions, it can inspire them to consider similar career paths. However, in Japan, many mothers encounter challenges in serving as career role models due to the widespread practice of leaving their jobs when the children are young. Re-entering the workforce with positions that support career advancement is rare, as discussed in Chapter 1, resulting in a limited number of mothers who can act as occupational role models for their daughters.

Therefore, the following examines whether mothers are acting as occupational role models or counter-role models among the interviewees in Japan and the UK. It seeks to highlight the most salient responses provided by the interviewees, while all other responses are detailed in Appendix 6.A, presented in Table 6.5 for Japan and Table 6.6 for the UK.

Interviewees in Japan

In Japan, at one end of the spectrum, three interviewees regarded their mothers' careers as role models. For instance, J7, an aspiring lawyer, drew inspiration from her mother, who held the position

of Chief Executive Officer at a cosmetics company. However, rather than her specific occupation, J7 was more impressed by her mother's eloquence and people management skills, which are essential qualities for lawyers.

...when I was distressed over managing a (chorus) club during high school, my mother, who had become a manager a few years earlier, was able to summarise and express well how to advance discussions and guide my juniors.

Furthermore, J22, an aspiring academic, was treading in the footsteps of her mother, who held the position of a university professor. However, her role model was not solely based on her mother's occupation, but also on her ability to successfully balance her professional and family life, especially in academia where so few women manage to do so.

Even if they (women) get a doctoral degree, they are not teaching anymore, because for example, they had children and stayed at home. So those who became academics with children would be 20 years older than me. I finally found someone, but then there wasn't anyone above that, and then I ended up with my mother. I always wanted to get married and have children, so the fact that I took the same path is because I was conscious of her.

Moreover, five other interviewees commended their mothers for their dedication to both their careers and family responsibilities, irrespective of their specific occupations.

On the contrary, 10 interviewees expressed a desire to differentiate themselves from their mothers, regardless of their mothers' occupations, as they aspired for uninterrupted and uncompromised careers. J25, an aspiring business lawyer, shared her perspective regarding her mother, who worked as an administrative assistant:

By watching my mother since childhood, I thought I wanted to continue working as a full-time worker even around childbirth. My mother quit working when she had my older brother....and seeing her often having trouble finding jobs, I became to think that, when I have children, I want to avoid quitting work by using parental and maternity leave.

Some interviewees recognised that the times had changed compared to their mothers' era. J21, an aspiring worker for an international organisation, shared her view of her mother, who worked as a part-time English teacher in secondary schools:

Something I hope to be a bit different is.....to have more of a career too. Maybe because of the generation difference, during her time, people were more stay-at-home-moms and less of a working mother. So that's why she was a stay-home-mom a lot of the time. But social standards are changing. So I would like a balance.

Others saw their mothers as role models in certain aspects but not in others. For example, J14, who aspired to become a certified accountant, considered her mother a role model due to her qualified occupation, although she did not necessarily see her intermittent career as an example to follow.

...because she has a qualification as an architect, it provided security as she had highly paid (short-term) contracts and was able to do inspection work. So from my mother, I thought it was necessary to get a certified occupation. On the other hand, my mother wanted a continuous career; but she often said it wasn't possible during her era.... So from that perspective, I think it's important to continue a career without quitting.

Interviewees in the UK

On the UK side, none of the interviewees were following the exact occupational footsteps of their mother. However, four interviewees regarded their mothers' uninterrupted careers as sources of

inspiration. UK12, an aspiring biochemist, said of her mother who was a human resource specialist:

(My mother was a role model) ... being a career woman. I'm set to follow the same path. And I want to be focused on my career and keep growing until I'm older. So I think in that sense, we both have the same goal. That's how I want my future to look like, just in a different field.

UK13, an aspiring barrister, spoke about her mother, who worked as an airline logistics specialist:

I would want to be that kind of role model for my children. I really respect the fact that she is self-employed and she's as successful as she is. She completely made her own way and have a pretty successful career, flexibly on her own terms with what she enjoys.

Furthermore, UK18, an aspiring neuroscientist, expected to follow a high-status occupation like her mother, who was a solicitor.

I've always been driven as a high achiever for several reasons, but one of them was just to try and make her proud of me....

Alternatively, seven interviewees commended their mothers for re-entering the workforce or for their ability to balance work and family life, irrespective of their occupations.

On the other hand, like those in Japan, 11 interviewees in the UK believed that their mothers could have pursued other paths, such as continuing their careers or furthering their education. UK19, an aspiring elementary school teacher, shared her thoughts about her mother, who had been a housewife:

What I would change is, I think, it's also important to sometimes put yourself first and your goals in life and career goals.

UK3, an aspiring university teacher, also shared her opinion on her mother, who held a master's degree but worked as a cleaner:

I definitely learned the lesson from her to not give up a career or education or aspirations for a relationship...She wanted to get a PhD. And I think, with childcare, she couldn't really get a job when she was looking after us most of the time.

Furthermore, five interviewees suggested that their mothers could have encouraged their fathers to take on more household chores, potentially freeing up additional time for their own careers or other activities.

Gender Dimensions in the Workplace

As explained in Chapter 1, while the micro/meso systems may explain a significant portion of the variance in the types of occupation and career prospects that females expect in the future, the exo/macro level factors should not be underestimated. In other words, in addition to individual characteristics and parental factors, the labour market conditions and societal norms can also have a substantial impact (Saha & Sikora 2008; Schoon & Polek 2011; Sikora & Saha 2009; Vondracek *et al.* 1999).

In the quantitative analysis of Chapter 4, it was revealed that girls in Japan had significantly lower occupational expectations compared to boys due to the challenging gender equality landscape in the country. Conversely, countries with advanced levels of gender equality were associated with higher occupational expectations for girls relative to boys. This landscape was assessed through

indicators such as the gender wage gap, the proportion of female managers, men's unpaid work time, and societal views on the role of housewives.

Building on this understanding, the following section explores the perceptions of interviewees in Japan and the UK concerning gender related workplace issues, aiming to elucidate how these perceptions might shape their occupational expectations differently. To achieve this, it highlights the most contrasting responses provided by interviewees in the respective countries. A summary of all responses can be found in Appendix 6.A, presented in Table 6.7 for Japan and Table 6.8 for the UK.

Interviewees in Japan

Regarding the overall social environment for women pursuing their careers, most interviewees in Japan expressed concerns and criticisms. They pointed to demeaning remarks made by politicians and highlighted that Japan's gender equality situation ranked the lowest among G7 countries. Additionally, some interviewees, like J24, had personal experiences of discrimination in their previous jobs.

What I didn't like was that women's right to speak up in meetings was low.When I said, "Excuse me, how about this?", they said "No, it's ok". Other women who were looked down upon seemed to have gotten used to it and didn't feel any discomfort (J24, aspiring aid worker).

J11, who had already received a job offer at a bank, pointed out that all the executives were men, and female bank tellers were obligated to wear uniforms. She also mentioned that female job seekers were advised to wear skirts, and in pharmaceutical companies, female staff were expected to pour drinks for clients during business dinners. In a similar vein, UK14, who was planning to become a political science researcher, shared that her Japanese mother had experienced difficulties while working for a Japanese company in London.

My mum doesn't have a lot of good things to say about Japanese working life. From her experiences, especially when she worked in a Japanese company, even though it was in London, she was saying how she hated it and it was horrible. She never went into detail, but I think it was just a lot of casual sexism.

Some interviewees criticised employers for discriminating against women by expecting them to leave their jobs when they had children, while others pointed out that women sometimes internalised this stereotype and imposed their own glass ceiling. Interviewees in the UK who had relatives in Japan also noted differences on the supply side.

...My school wasn't competitive. It was a military school, actually. So a couple of the people, girls included, were expected to go into the army. Nobody I know wanted to be a stay-at-home mom, except one girl... but people don't really say that in England.....because wanting to have a career shows that you are driven. It's not really something I spoke about with my Japanese friends, but my cousin in Japan, she does not seem to be chasing a career at all, whereas another one of my cousins, she has a career, and is always working, but things like temporary jobs, so clearly, if she gets married, I expect she'll drop out of that job.... the girls I was with didn't talk about what they wanted to be when they grew older, and that is a marked difference between England and Japan (UK4, aspiring scientific researcher with a Japanese mother).

The background to this issue is the persistent norm regarding gender roles, where women are expected to manage household chores and, in recent years, to work as well, albeit mostly part-time, to supplement the household income. This is because, as explained in Chapter 1, most full-

time jobs in Japan require long hours, making it difficult for women to simultaneously care for their children (Nemoto 2013; Takahashi & Nakagami 2007; Yamaguchi 2019a). Due to these conservative gender norms, many interviewees expressed concern about the lack of role models in their expected occupations. J25, an aspiring corporate lawyer, lamented:

...since women who have qualification for legal practice is only 20-30%,...you can see how tough reality is....At the law firm I'm working part-time,...there are meetings until midnight. I see female lawyers returning late and wonder how they are managing (J25, aspiring lawyer).

As mentioned earlier, even in academia, J22, an aspiring university teacher, mentioned that women with doctoral degrees are often not teaching but staying at home to take care of their children. Other interviewees who were aiming for highly professional occupations, such as medical doctors or lawyers, expressed the need to learn how these professionals successfully balanced their work and personal lives. This aligns with the findings of Olsson & Martiny (2018), who emphasise the benefits of presenting female role models who have both successful careers and children.

The issue is particularly significant because, as reported in the Public Opinion Poll on Gender-Equal Society 2018, 47% of female workers in Japan ceased working after the birth of their first child between 2010 and 2014 (CAO 2019c). Even though many eventually return to work after several years, the jobs they find are often part-time or irregular (Nagase 2003, 2018; Yamaguchi 2019a), offering few benefits or prospects for career advancement.

Consequently, while approximately two-thirds of the interviewees expressed a desire to take maternity and parental leave and/or work reduced-hours, many cited the challenge of continuing their careers, despite the availability of these systems. They believed that their employers or colleagues would not be receptive to such arrangements. Research by Teramura (2015) supports this, indicating that corporate norms, culture, and workplace atmosphere strongly encourage female workers to resign upon marriage and childbirth. Additionally, the *de facto* entitlement for reduced hours in Japan is limited to parents with children under three, with the default being 6 hours of work per day. This is significantly more restrictive compared to the various flexible arrangements available and commonly used in the UK, as explained in Chapter 5.

Accordingly, J6, an aspiring IT visual technician, said she might quit and then try to work for a different company after the children have grown because taking parental leave might be a nuisance for co-workers. A few interviewees therefore preferred to work for the public sector, large companies, international organisations, or abroad, since these avenues seemed more conducive to taking leave or working flexibly and maintain a WLB. Many also saw that nursery shortage was a serious problem but that hiring nannies was not common in Japan. For example:

I would like to use parental leave as much as possible, but I think there's a big difference between availability of the system and the actual utilisation at work....I think foreign firms and international organisations have better systems and the environment to balance work and childcare than Japanese firms. So that's one of the reasons why I want to eventually work abroad or for an international organisation (J9, aspiring aid worker).

I would prefer working at an international company or a Japanese company with international presence because the maternity and paternity leaves are much more generous.... (In Japanese culture).... you're not a good employee because you're not being there for everyone and you know you're taking leave and everyone else is working (J10, aspiring financial consultant).

Furthermore, several interviewees also raised concerns about the potential challenges faced by their future partners when attempting to take paternity leave. J21, an aspiring aid worker, highlighted that Japan has commendable paternity leave laws but noted that few fathers actually utilise this benefit.

Conversely, a few interviewees stated that they saw less discrimination among workers in their 20s or in certain occupations like art directors, graphic designers, or teachers. J8, an aspiring marketing professional at a bank, mentioned that her bank was actively promoting women, and being a woman was no longer a hindrance in her workplace. In fact, there was a corporate reputational risk for banks that did not increase the ratio of female managers. Some interviewees noted that their seniors had worked hard to become role models, and now, it was their responsibility to serve as examples for the younger generation.

Others were also optimistic, noting that employers were now mandated to hire and promote more women in professional roles, expand parental leave options, and report these statistics to the government — an observation corroborated by the findings by Osawa (2015). J26, an aspiring corporate legal adviser, heard from recent graduates that many individuals were taking advantage of parental leave.

The human resource person I'm close to said that it's an age where people take parental leave – it's become normal for even men, so there isn't much to worry about. Actually, it's more detrimental for companies to lose human resources, so she told me that if staff can take it and return to work, it's most welcomed.

In fact, in recent years, the proportion of full-time female employees utilising maternity or parental leave without quitting has also increased to around 80% (MHLW 2021b). Certain localities have also expanded the availability of nursery places. Thus, young females are seeing positive changes in society that could enable them to take up their occupational choice and manage a family.

In general, only a minority of interviewees in Japan explicitly mentioned adjusting their occupations solely due to concerns about WLB. This could be the case because many of them were still at a stage far from having children, and possibly because support policies and practices have been gradually improving. However, the traditional value placed on motherhood over work may have been deeply ingrained in them, to the extent that it could have made an unconscious and long-term impact on gradually circumscribing the occupational choices of the interviewees. This suggests that further research in this area is necessary to shed more light on the complex interplay between traditional societal values and career expectations among young women in Japan.

Interviewees in the UK

On the UK side, while some interviewees mentioned that the upper echelons of academia, pharmaceuticals, or law were predominantly occupied by older white men, not many referred to overt workplace discrimination. Furthermore, a common view among interviewees in science majors was that females are not disadvantaged in STEM, particularly since there were many women in these fields, unlike the situation in Japan.

...I have noticed that there are more women in the industry than men in Belgium and in the UK, actually. In my class, for example, we were 28 people in our master's and only four were guys.... It turns out that there are more women in pharmaceutical research (UK6, aspiring pharmaceutical lab scientist).

...I spent some time at a biological lab (at a national Japanese university)... They essentially said that science is very male dominated in Japan....their estimate was 90%

men.... I think it's like 60% men from my personal experience in England.... In Japan, they seem to expect women to do a degree, and then become stay-at-home moms anyway.... What's the point of going into further education if you're not going to pursue a career (UK4, aspiring researcher, with a Japanese mother)?

Not only were there more women in these fields, but interviewees saw that they also had children and were able to advance into managerial roles. Some also noted that society is progressing in this direction.

Especially now in the UK, there's a lot more female empowerment to go into big careers and still be able to have children.....there's a lot of representation of female doctors.....They're both big social aspects that everyone is driving towards currently. I've always felt like I've had role models in medicine (UK1, aspiring medical doctor).

I know a lot of women in academia who are lab leaders, and they have young children... So I think my working environment is very conducive to women working... It is becoming more open, so people aren't against taking time off to have children as they are like in typical banking (UK7, aspiring immunology researcher).

More specifically, over half the interviewees in the UK expressed a preference to take maternity/parental leave and work part-time when their children were young, which was similar to the preferences of interviewees in Japan. However, unlike their counterparts in Japan, not many interviewees in the UK expressed significant concerns about their ability to do so. UK21, aspiring financial consultant, said:

I'd probably work part-time and get back into full-time work when they're old enough, maybe like 15 or 16. I'm thinking, two or three times a week or maybe just a few hours a day for those two or three days. Or maybe negotiate with the company to be like a zero-hour basis....My friend's mum who is a doctor, she worked part-time for 18 years. She should just go into work two days a week. Yes, she does *get all* the benefits still.

This lack of serious concern in working part-time is likely because, as explained in Chapter 5, in the UK, there is no great disadvantage compared to full-time in terms of hourly wages, benefits, and career prospects, which is in stark contrast with Japan. Furthermore, switching between full-time and part-time is relatively easy in the UK, a situation that does not happen often in Japan.

Summary

This chapter conducted a comparative analysis of interviews with female university students in Japan and the UK to verify whether Japanese girls indeed have relatively low occupational expectations, and if so, to gain insights into the influencing factors. The study confirmed that the average SES of the expected occupations by the interviewees in Japan was lower than that of their counterparts in the UK. In particular, there were more interviewees in the UK aiming for occupations in the STEM field. To elucidate the factors, the chapter specifically compared individual preferences for future partners, influence of parents within the micro/meso systems, and gender-related workplace dynamics within the exo/macro systems between the two countries.

Although the Status Dependence theory had been put forth as a hypothesis to explain the low occupational expectations of Japanese females, the findings suggested that most interviewees in Japan did not strongly demonstrate a reliance on their future husbands for their social status, possibly as most of them were career oriented. Furthermore, since the potential attributes of future partners remained unknown, preferences did not appear to have a significant impact on their occupational expectations. As for the interviewees in the UK, however, they were even less dependent on their future partners, with some considered having children without one, indicating greater possibilities for women's financial independence. Additionally, a few interviewees envisioned their future partners to

accommodate their career ambitions or taking on the role of a stay-at-home parent. Furthermore, many emphasised the importance of their partners equally sharing household chores and childcare responsibilities to enable them to focus on their careers, challenging the default of assigning these tasks to women.

Concerning parental influence, the findings discovered that correlations existed between occupational expectations, academic competence (measured by the competitiveness of university groups), and parents' education and occupational SES in both Japan and the UK. However, the UK presented a more complex picture compared to Japan. For instance, some interviewees in the UK who were attending highly competitive universities or expecting to take up occupations with high ISEI scores had parents without university degrees or were engaged in occupations with relatively modest ISEI scores, a result not found in Japan.

This aligns with the quantitative analysis using PISA data, which demonstrated that while parents' occupations influenced the occupational expectations of Japanese high school girls who were planning to go to university, this social class effect was not evident in the UK. These results suggest the influence of alternative mechanisms in the UK, such as the student loan system and broader societal initiatives that facilitate young women from disadvantaged backgrounds to pursue higher education at prestigious universities and aspire to challenging careers.

In addition, although parents' encouragement may not have been the sole determinant of their daughters' career choices in both countries, there was a notable difference in the nature of parental encouragement. In Japan, parents were more inclined to encourage occupations that prioritised stability over high social status. This situation stemmed from the lower expectations associated with female careers compared to those of males who are traditionally seen as future breadwinners. In contrast, in the UK, more mothers had prestigious occupations who pressured the interviewees to aim for higher career aspirations, thus elevating their expectations towards challenging professions.

The mixed perceptions of mothers as role models were similar between Japan and the UK. In both cases, these role models were primarily not about specific occupations, as very few interviewees aspired to follow in their mother's professional footsteps. This finding aligns with a study that examined 5.6 million parent-child pairs in terms of occupations, concluding that children typically choose occupations different from their parents (Adamic & Filiz 2016).

Furthermore, in both countries, while a few interviewees regarded their mothers as role models for their ability to maintain successful careers or achieve a WLB, a larger proportion of interviewees aimed to avoid career interruptions or compromises experienced by their mothers. Consequently, the presence or absence of role models were elsewhere in society that either motivated or discouraged them in shaping their occupational expectations.

In this regard, the study confirmed that the interviewees in Japan lacked female role models in their expected occupations who successfully balanced work and family life. This situation has remained relatively unchanged since the early 2000s, even after the implementation of the Equal Employment Act (Ouchi 2012). As a result, the interviewees in Japan anticipated greater challenges in achieving a WLB, particularly concerning parental leave and flexible work for childcare. They expressed concerns about potential career disruption and inflexibility at the workplace, partly stemming from Japan's rigid labour system and an unwelcoming atmosphere towards leaves and reduced work hours, as explained in Chapter 5. Additionally, these interviewees were well aware of workplace discrimination, prevailing gender stereotypes that burdened them with household responsibilities, and a prevalent culture of excessive overtime work, which was incompatible with family life.

These systemic constraints in the broader social and economic context in Japan are influencing the occupational choices of many females. This phenomenon aligns with findings from earlier studies conducted in other countries (Saha 1982). Many Japanese women opt for careers in the public sector or certified professions, driven by concerns about the feasibility of sustaining their careers once they

become mothers. Although schools and universities in Japan have made efforts to expose female students to occupational role models, the persisting uncertainties surrounding WLB and career progression could have discouraged the interviewees to aim for occupations with greater qualifications, responsibilities, prestige, and income.

In contrast, on the UK side, while some interviewees acknowledged the dominance of men in the upper echelons of certain sectors such as academia, pharmaceuticals, and law, not many of them pointed to overt discrimination in the workplace. In particular, those pursuing STEM occupations did not perceive significant disadvantages due to the substantial presence of women in these fields. Several interviewees even mentioned that their respective industries had more women than men and that they saw a shift in societal attitudes towards empowering women to pursue challenging careers while still accommodating family life. In addition, more than half of the UK interviewees expressed a desire to take maternity and parental leave and work part-time once they had children, but relatively few expressed significant concerns about doing so, particularly when compared to the interviewees in Japan.

This study has several limitations. Firstly, the interviewees may not be entirely representative of all female university students in Japan and the UK, as they volunteered to share their perspectives on their future jobs and were likely to be more career oriented. Secondly, while the interviewees attended universities situated in diverse geographical areas, many of these institutions are competitive and located in relatively large cities. This might suggest that the interviewees were more progressive on gender issues compared to the average female university students in both countries. Thirdly, differences in the duration of bachelor's and master's courses in Japan, which are four and two years, respectively, and generally three and one year in the UK, may have influenced the clarity of the interviewees' occupational expectations. Fourthly, disparities in the labour market dynamics between Japan and the UK, where Japanese employers tend to hire generalists while UK employers favour specialists, complicate direct occupational comparisons. Lastly, the ethnic diversity among the interviewees, particularly in the UK, including those with one or two Japanese parents, introduced complexity when making cultural attributions (see Appendix 6.B for descriptions and cultural interpretations of students who had mixed backgrounds).

While acknowledging these limitations, this chapter has affirmed the lower occupational expectations of female university students in Japan in comparison to their counterparts in the UK. It has also shed light on the influencing factors. While the effects of parental education and occupation can be observed in both countries, the transmission of social class effects seemed more pronounced in Japan. Furthermore, a clear contrast between Japan and the UK is that parents in Japan tended to discourage girls from pursuing challenging careers in order to prioritise family care, while some parents in the UK exerted pressure on their daughters to aim for high-status occupations. In addition, although most mothers were not typically seen as occupational role models in either country, the UK had a greater presence of female professionals in their chosen occupations. As a consequence, female students in the UK had fewer concerns about balancing work and life in their careers. Thus, it can be concluded that these factors, gradually ingrained into the subconsciousness of interviewees in Japan as they transitioned from childhood to adulthood, cumulatively circumscribed them to a greater extent in compromising their occupational expectations compared to those in the UK.

Appendix 6.A: Responses on Parental Influence and Workplace Issues¹⁶

Table 6.5: Summary of Responses by the Interviewees in Japan on Parental Influence

ID	Parental Encouragement		Mother as	
	Gender differentiated	Gender neutral	Role Model	Counter Role Model
J1	Father expects better university and job for a son.			
J2	Mother expects better university and work for a big company for a son.		Worked in an area she studied.	
J3		No difference with younger brother.	Worked when she had time.	
J4		No difference with younger brother.	Did housework with ease.	But should have continued work.
J5	Father expects a son to go to a national university and become a public servant.		Worked and did housework.	
J6	Father would not have sent a son to technical school.			
J7		Mother expects a son to do more housework.	Continued working. Learned from her experience as manager.	
J8		No difference as I am already pursuing a male course.	She quit working but earned a qualification.	Shouldn't be submissive to her husband.
J9	A son would have been sent abroad.			I would have gone back to work.
J10	Probably more encouragement to do engineering.			Did not have to sacrifice her career for the children.
J11	A son would have been expected a more stable and prestigious job.		Good at cooking. I want my future partner to be a good cook.	
J12		My younger brother is not expected more.	Worked full time and prepared meals.	
J13		No gender difference with my younger brother.	Valued the family.	But I want to continue working.
J14	My grandmother expects more from my older brother.	But not by my parents.	Was able to work on contracts with a qualification.	But I want to continue working.
J15		No difference with my three older brothers.	Prepared meals and did pick-ups and drop-offs.	
J16		No difference with my younger brother.	organisation of household chores.	
J17		Same expectation with my younger brother.	Worked reduced hours.	
J18	Relatives expects a male to continue the family name.			Compromised her potential to adjust to her husband.
J19	My mother said a daughter should go to a junior college and it's not necessary to earn.		Did both work and housechores.	
J20		No difference with my older brother.	Worked hard.	
J21		No difference.		I want to have more career.
J22	Different from my two older brothers but that's because they are competent not because of gender.		Being married and an academic.	
J23		I am more competent than my brother, so they don't have more expectation from him.		
J24		There is more expectation from me.		I prefer to work.
J25		No difference with my older brother.		I don't want to quit, by using parental leave and reduced work hours.
J26		No difference with my older brother.		Want to work even with reduced hours.
J27	Father expects a son to go to a famous university.			

¹⁶ Information presented in this appendix is derived from interviews conducted by the author.

Table 6.6: Summary of Responses by the Interviewees in the UK on Parental Influence

ID	Parents' background	Parental Encouragement		Mother as	
		Gender differentiated	Gender neutral	Role Model	Counter Role Model
UK1	Japanese mother and British father	Japanese relatives expects me to be a nurse.	Parents and English relatives are gender neutral.	Brought passion into work and child-raising	
UK2	Japanese parents	Especially father would have emphasised taking care of family financially.			Should have done less household chores.
UK3	British parents	Younger brother had less pressure to finish school. Girls are expected to follow rules.			She should not have given up her career and PhD.
UK4	Japanese mother and British father	Expected to be a doctor or lawyer for a daughter and doctor or engineer for a son.	No different for a son because I go to a male dominated field.	Working and keeping the household.	With a part-time job, should have done 70% household chores instead of 100%.
UK5	Ukrainian parents		Equal expectations with two older brothers.		She couldn't get a university education, so it was important for me.
UK6	Japanese mother and Belgian father		None	Juggled work and life. Spent quality time with me.	
UK7	British parents	Sisters should look after the brother. Men go to work and women take care of the house and children.			Finance was all in father's name. I want more control.
UK8	Pakistani/ German mother and Italian/ American father	I am expected to cook but not my brother.	Otherwise same house chores and expectations.	Work driven but was always available for us.	
UK9	Italian parents		No different from younger brother.	Balanced work, family and social life.	
UK10	Taiwanese mother and Belgian/Spanish father	There was a big dispute when the brother quit engineering.	Parents say they treat the siblings the same way.	Stable presence at home.	
UK11	Portuguese parents		No gender difference	Sacrificed her career for the family to be together, which I would do the same.	
UK12	Parents from a Former Socialist Country		Same expectation with younger brother.	Career woman.	I don't want to have children.
UK13	British parents	Being good at maths is smart, which is associated with boys. Girls good with English is not necessarily considered smart.		Feminist with a successful career on her own terms.	Should have been more forceful about my father's household chores.
UK14	Japanese mother and British father		No difference. When my older brother achieved expectations, parents had the same with me.	Getting back to work and doing something she wanted to, even though father was not happy.	
UK15	British parents		Cannot imagine gender difference.	She never let the military put her down and followed her dreams.	Could have been firmer with my father on doing chores. Mother took care of mother-in-law, but father should have.
UK16	British parents		Viewed the brothes and sisters the same.	Good child care and work balance.	Wanted her to come and see my extracurricular activities.
UK17	British parents		No gender difference.	Cared about everyone else being happy.	Didn't do the things she wanted to, like going to university because she thought she didn't have enough time to study and work.
UK18	Irish mother and British father	Father might have expected a son to be more interested in engineering like him.	Otherwise no gender difference.	Managed to work and raise children.	Had difficulty in working from home and looking after us.
UK19	Hungarian parents	Father would have pushed more education for a son and not wanted him to be a teacher because of the salary. He expects men to be the ones working.		Children was priority.	Also important to have a balance by putting yourself first and have career goals.
UK20	Japanese parents	Pressured my brother to go to a good university.			Should have had her own time.
UK21	Hong Kong Chinese parents		No gender difference.	Efficient in house chores.	Would have had father dedicate more to chores.

Table 6.7: Summary of Responses by the Interviewees in Japan on Workplace Issues

ID	Workplace Concern		Maternity/Parental Leave or Flexible Working	
	Challenges	Opportunities	Challenges	Opportunities
J1	Few female managers due to marriage and pregnancy.		Difficult to take parental leave in companies and few men take it.	
J2	Few female managers due to leave after pregnancy		Men should take parental leave too.	Easy to take parental leave in social services.
J3	Women have to work and do household chores.	There are female art managers so not much gap.		Male university faculty members are taking parental leave.
J4	Women should have more options	No difference in management. Males could be house husbands.		There are companies that support maternity/parental leave.
J5	Prevalent overtime work is a challenge for child raising		Difficult to take maternity/ parental leave. Should force males to take parental leave.	
J6	Female office workers have too much overtime work including on weekends. Women are expected to do housechores.	Digital art companies have weekends off and no discrimination.		
J7	Worried because only few women. Too much overtime work. Women are expected housework. Outsourcing is rare in Japan.		Parental leave is unpaid, reduced hours is incompatible with workplace.	
J8	No role model in the 40s.	No discrimination before 30s. Companies worry about reputation if they don't increase female managers	Society's loss for not being able to work due to lack of nurseries.	
J9	Difficult to get back to work once you quit		Parental leave is difficult to take. Better overseas or in international organisations. Nannies are not common.	
J10	Women are asked if they will continue working once married. Politicians make disparaging remarks on women. Japan has lowest gender equality among G7.	Female labour force participation is high. Women are being recruited more.	Maternity and parental leave are hard to take. International companies have higher standards. Few men aware of parental leave.	
J11	Have to wear a skirt for interview. Women have to attend to drinks with clients. Only men in banking. Changing jobs is difficult. Men should do child raising too.			
J12	Tasks are changed when married and have children. Employers won't send them on missions.			
J13	There are men's dorms but not for women. Men have higher status.	Companies are increasing female professionals. Women need to be proactive.		
J14		Female accountants with children can end early.	Men and women should take parental leave equally.	
J15	Women who want to work and do child raising have difficulties because companies want to grow.		Mothers hesitate taking parental leave.	
J16	More difficult for women to get promoted cf men, which is a deterrent to work in Japan.			
J17	Men are promoted more not because of discrimination but because career delay due to parental leave.	Female doctors are preferred by both female and male patients, so it's an advantage.		Pay to hire child minder.
J18	Gender wage gap even upon entry due to male preference. Companies don't expect much from females because they leave when pregnant. Women's own stereotype is the bottleneck.		Problem is the mindset of men who think they can contribute to the family without taking parental leave. They need to involve in children's development and make Japan a kinder society.	
J19	Environment is not ready for working and child raising. Urban and rural areas both have fixed ideas that men work and women do housechores.		Worry about returning to the same post after leave.	
J20	Nursing environment is very busy and often require unpaid overtime.			
J21	Want to work in international companies because more females are in higher positions and role models. More difficult for women to work in Japan.		Japan has one of the best paternity leave law but not many take it.	Maternity leave policy ensures women to go back to the work force.
J22	Japanese literature department is finally about half female faculty but law department has zero. Need role models.			
J23	Men have advantage even in the public sector. Easier to take parental leave and not much overtime in foreign companies.		Child care workers are overworked.	
J24	Women had no right to speak in meetings, so I quit. Women get used to this.		Society does not welcome maternity and parental leave.	
J25	Females are only 20-30% in the legal field. How do female lawyers cope with working late? Promotion is difficult.			Men are being encouraged to take parental leave.
J26	In Japan, there is gender role and pressure to do household chores. But not in France and do not feel discrimination.		Nannies and baby sitters are hired in France but is not common in Japan.	Many senior women are taking parental leave and it's becoming the norm for men. Companies do not want employees to leave.
J27	Given up on the wage gap between administrative and professional jobs.			Can ask companies their share of women and rate of maternity/parental leave uptake.

Table 6.8: Summary of Responses by the Interviewees in the UK on Workplace Issues

ID	Workplace Concern		Maternity/Parental Leave or Flexible Working	
	Challenges	Opportunities	Challenges	Opportunities
UK1	Older patients treat female doctors like a nurse. Country side mindset expects women to stay at home or be a receptionist and look after the husband.	There are more female medical students than males and most hospitals are female dominated. In London, men and women are equal.	Taking parental leave will delay promotion against males which is frustrating. Three month maternity leave is too short. Paternity leave is not prevalent.	
UK2	Male teachers are treated more seriously.		Many people cannot afford nannies. Employers do not welcome mothers being late taking children to school.	Having nannies is not looked down upon. Paternity leave is increasing.
UK3	Female academics have less publication if they have children.	Academia is good for non-discrimination. See female professors having children.	Childcare is really expensive and hard to secure. Paternity and maternity leave should be equal.	
UK4	Big imbalance in hiring by playing into stereotype. Females require more effort to convince clients that you know your area. Older generation is the concern.	Being a woman can have positive discriminatory effect if companies have to meet quota.	Both paternity and maternity leave should be longer.	Many 16-18 year olds are looking for nannying jobs for mothers working long hours.
UK5		Male and female teachers have equal opportunity.		Different within Europe. In Germany, women only took a few weeks off, but in Italy, they stayed at home and did not go back to work.
UK6		There are more women in pharmaceutical research than men in Belgium and UK.	I don't want to be dependent on parents for childcare, although it's sometimes nice.	There can be subsidies for child care.
UK7	Professors are mostly white males. Need a few publications before parental leave. Semi rural places and older population have more traditional views.	Flexible and inclusion. Female professors and lab leaders are increasing. Some have young children but there is no pressure to have children soon. Environment is flexible, inclusive and conducive to women. People are not against taking time off.	Intense job like banking is less open to taking time off. Maternity leave shouldn't be longer than paternity leave.	Plenty of nurseries and waiting time is OK. The government funds those who earn under a certain wage, but only from two children.
UK8	When I say I want to prioritise career over children, I get comments. World expects women to have children. A successful woman is someone settled down with a big family, not with occupational achievement.	Don't feel disadvantaged when applying for jobs. Conservation is regarded as women's occupation because it deals with animals.	As there is stigma for paternity leave, it should be encouraged. In the UK, parental leave is a mother's thing.	In France, friends had nannies or stay-at-home moms in primary school. But in middle school, mothers worked, so they had nannies or friends were independent. Big offices are opening day care centres for young parents.
UK9	My school was dominated by stay-at-home moms looking after kids. Even if both parents worked full-time, childcare was automatically assigned to mother. Though they didn't mind too much, they couldn't develop their careers.		Nannies are quite expensive and never British.	We had baby sitters and someone helping at home.
UK10		I never faced discrimination or received gender related comments.	Architect cousin in Paris had hassle to get her baby in a nursery close by, so my parents had to take care sometimes. Paternity leave is shorter than maternity leave. Parents should be able to decide allocation of leave.	
UK11	There is only one female supervisor in my cluster. Women have to work beyond working hours and lack good WL.B. They don't want to have children or only once they are older. We need different role models, including child-free by choice. In Portugal, families cannot rely only on male salary, but since salary is low, women don't take time off. In Brussels, high salaries allowed either mothers or fathers not to work.		In the UK, childcare is expensive and hard to access.	Portugal is a family based social system for day care, so grandparents or a live-in nanny took care of children. As this is not common anymore, sister uses a nursery.
UK12	Top in pharmaceuticals is men. Societal expectations in Eastern Europe is to marry and have children before 30 or 35.	UK is more progressive and Western Europe is more lenient with family expectations. At the university, 65% of the biochemistry course are females.		
UK13	Top in judiciary are old white men. Hiring is based on stereotypes, discrimination, and prejudice as chambers don't have hiring policies. Fewer women become barristers because the job is demanding by arguing with others. Old white judges do not take into consideration female's childcare responsibilities and demand delivery at short notice.		Nursery is quite expensive.	There is subsidy for a certain income bracket.
UK14	In the workplace, females might not be taken seriously. They may receive inappropriate comments.	Don't think there is significant discrimination. Many companies have programmes to get women who left for children to come back.		Daycare is offered at my university for post docs. There is a lot of talk about trying to increase paternity leave.
UK15		Don't think gender matters in job applications.		
UK16		Teaching is female dominated. Head and deputies in my schools were all women.	Paternity leave should be longer or the same as maternity leave. Brother had twins, but his wife was on her own after two weeks.	Nursery is quite expensive, but as it is not unreasonable, it is manageable.
UK17		Gender neutral in my field. Museums are mostly women.	Daycare is expensive. Teachers were grateful for maternity leave, but men should have longer leave as well.	
UK18	Social expectation is for women to be responsible for care giving. When women go for jobs, they are asked about plans to have children. Human resources policies are not in place.	There are women principals and professors.		
UK19		Females have advantage for elementary teaching because females are better at caring. For older students, genders are equal.	Paternity leave is not common in Hungary.	As hiring a nanny in Hungary is not expensive, had an old lady for 8 years.
UK20	In Japan, it's difficult to take paid leave or be promoted. After child birth, females cannot return to the same position because it is unwelcomed.			
UK21	In Asia, women are looked down upon.	In UK, salary, promotion, and career paths are transparent and equal for men and women.	Perhaps rural areas do not have many nurseries because there isn't much work.	There's paternity leave and subsidies for childcare which is accessible and offered immediately.

Appendix 6.B: Descriptions and Interpretations of Interviewees with Mixed Backgrounds

In both Japan and the UK, several interviewees showed cultural diversity, with a few having experienced their formative years outside these countries. Furthermore, some interviewees had familial roots that extended beyond Japanese and British heritage. These mixed backgrounds introduce complexities when attempting to attribute the influence of micro/meso and exo/macro environmental factors on their occupational expectations. Essentially, it remains challenging to determine whether these individuals were primarily shaped by their parental upbringing, the cultural environment in which they were raised, or a blend of both. Nonetheless, the following section briefly describes the backgrounds of interviewees with diverse upbringings, aiming to shed light on the intricate interplay of cultures.

UK1, UK4, UK14, UK6, and J16 had Japanese mothers and British, Belgian, or American fathers, growing up in their fathers' countries. These interviewees all held high occupational expectations, aspiring to become a doctor, biologist, academic, cancer researcher, and certified accountant. Their Japanese mothers, who had moved to their husbands' countries, were exceptionally supportive of their daughters' career aspirations, irrespective of their own educational or occupational status. Given that the levels of encouragement exceeded that of the average mother of the interviewees in Japan, it is plausible that these Japanese mothers may have been influenced by the societal norms of Europe or the USA, where they have integrated themselves. This influence could have led them to emphasise the importance of successful careers for their daughters, reflecting the prevalent norms of gender equality in these countries. This includes both the constraining need for females to pursue careers and be economically independent, as well as the assurance that this is attainable.

Among the interviewees in the UK, there were two students with both parents of Japanese origin. UK2, aspiring to become a secondary school teacher, lived in several continental European countries with her parents and attended international schools. UK20, aiming to work as a community worker, grew up in Japan. Neither of their mothers were employed, and their fathers held gender-biased views, believing that girls should primarily focus on taking care of the family. This implies that, despite the latter family having lived in Europe for many years, their perspectives remained rooted in traditional Japanese conservatism.

Within those interviewed in Japan, J10, an aspiring financial analyst, had a unique background. She was born to Indian parents but grew up in Japan, attending international schools with peers from Europe, USA, and Asia. Her father worked as an industrial production engineer, while her mother was a secondary school maths teacher. Indian culture can be complex when it comes to gender issues. On the one hand, many upper-class women pursue prestigious occupations such as lawyers and doctors, but on the other hand, as per J10's observation, Indian society tends to prioritise males over females and maintains traditional gender roles.

In J10's case, her father was supportive of her pursuing challenging occupations, particularly in the technology industry, including in Japan. However, her mother leaned towards emphasising family life regardless of her chosen occupation. J10 herself felt more aligned with her Asian schoolmates who valued women's roles in the family, in contrast to her European peers who were more career oriented. Nevertheless, she maintained aspirations to work for an international consulting firm as a data or financial analyst, which is considered as prestigious in Japan.

Among the UK group with mixed backgrounds, several had parents from Southern Europe, Former Socialist countries, and Asia, although most of the students did not grow up in their

parents' countries. For instance, UK9, an aspiring documentary filmmaker, had Italian parents but grew up in the UK. Italy is a conservative Southern European country with traditional gender roles. However, UK9 did not think that she was treated differently from her brother by her parents in terms of expectations for future career or family life.

The parents of UK11, an aspiring researcher, were from Portugal, another conservative Southern European country but with a relatively high rate of women's full-time labour participation. Her parents moved to Brussels for her father's job at the European Commission, and her mother, who was a banker, gave up her job in Portugal to follow her husband. While she found a job in Brussels, it was at a lower level compared to her previous position. UK11, who mostly attended international schools in Brussels, said that she valued family life and would do the same as her mother. This could imply two things. First, UK11 could have been influenced by the conservative family tradition of her parents and her country of origin. Second, as an aspiring researcher with English proficiency and an expected doctoral degree, she had reason to be confident in finding jobs as an academic possibly beyond the UK or Portugal to follow her future spouse to keep the family together.

The three interviewees with parents from Former Socialist countries exhibited different patterns. UK19, an aspiring elementary school teacher with Hungarian parents, had a mother who was a housewife and a father who owned a restaurant. While UK19 grew up in Hungary, since her father wanted her to have a good education, she attended international schools in Budapest. At the same time, her father believed that women should stay at home and take care of the family. Her father's complex stance, valuing his daughter's education but also expecting her not to work, can be seen among many traditional Japanese parents as well.

UK5, whose parents were from Ukraine, also aspired to become a primary school teacher. Her mother was a housewife, and her father was a director of a packaging company with postings in Italy, Germany, Russia, and other countries, where UK5 attended international schools. In her case, her parents did not exhibit gender bias or hold different future expectations between her and her two brothers.

In the case of UK12, an aspiring biochemist with parents from another Former Socialist country, her father compromised his career for her mother, a human resource specialist who took up jobs at multinational organisations in continental Europe since UK12 was young. Consequently, her father became a homemaker to keep the family together. However, as UK12 did not like the idea of compromising her career for the family, she did not want to have children of her own in the future.

Research on gender equality in Eastern European countries such as Ukraine and Hungary vary in coverage, but Hungary, as an OECD and EU member, receive more attention, presenting a mixed picture. Thévenon (2011) states that, while policies supporting women in balancing motherhood and work are generally weak among Eastern European OECD members, Hungary stands out for providing comprehensive support. However, Van der Lippe *et al.* (2019) explain that in Hungary, where gender equality is not a top priority, generous maternity and parental leave arrangements exist to mostly encourage women to exit the labour market to care for children. Chybalski & Marcinkiewicz (2021) categorise Hungary and other Eastern European countries as high welfare states with a low public-private mix in providing pro-family and pro-female services. In addition, Kristó (2015) notes that fathers in Hungary has become eligible for family support, with full pay available if the parent returns to work after a year of the child's birth. The mixed picture in Hungary may be attributed to the country's conservative society, combined with the requirement to implement the EU's gender equality mandate and the Barcelona target, which sets standards for childcare provision among its members (Nagy *et al.* 2016; Kowalewska 2017).

Among students in the UK with Asian backgrounds from countries other than Japan, there were various family dynamics. For instance, UK21 had parents from Hong Kong who were very supportive of her education but did not pressure her about her future career. They encouraged her to follow her interests, to which she did not perceive any gender bias. On the other hand, UK10 had a Taiwanese mother and a father who was Belgian and Spanish. She did not perceive her parents to have lower expectations for her compared to her brother. However, when they expressed concern about her brother changing his career path from engineering to music, she questioned whether they would have had the same reaction if it were her. Meanwhile, UK8 had a complex heritage, with a mother who was British Pakistani and German and a father who was Italian and American. Both parents had high hopes for her career and expected her to achieve success on par with her brother, whether it be as a doctor, lawyer, or in a high-ranking position in an organisation. These examples demonstrate the diversity of family backgrounds and expectations among students with Asian backgrounds.

In conclusion, the interviewees coming from mixed environments, both in the UK and Japan, had a range of complex factors that potentially influenced their occupational expectations. These factors included the cultural attitudes of their parents and their upbringing in different countries. Among interviewees with a Japanese mother and a non-Japanese father who grew up in Europe or the US, there was a tendency towards high occupational expectations and supportive mothers. On the other hand, in the UK, interviewees with both Japanese parents experienced gender bias, particularly from their fathers, who had conservative views on their careers. Other interviewees with parents from Southern Europe, Former Socialist countries, or Asia, growing up in various countries, and generally having attended international schools, had varied experiences regarding expectations from their parents, ranging from gender bias to laissez-faire attitudes and high hopes for their careers. These findings highlight the intricate interplay of cultural and familial factors in shaping the occupational expectations of young women in both countries.

Hence, the occupational expectations of these interviewees from diverse backgrounds may have been shaped on a case-by-case basis through a combination of factors such as parents' cultural or personal influence, peer and school environment, and exposure to female role models in the places they grew up in, making generalisation highly challenging. While these students attended university in the UK, since many did not necessarily spend their formative years in the country, this research is not strictly about comparing Japanese and British students. Rather, since most of the students either grew up in Europe or have one or two European parents, it is closer to contrasting students between Japan and Europe more widely. In this context, despite the heterogeneity of Europe on gender issues, there are still commonalities distinct from Japan. Furthermore, while the UK is no longer an EU member, its longstanding legacy in Europe continues to attract students from neighbouring countries, offering nuanced perspectives on factors shaping occupational expectations of female university students that could provide lessons learned for Japan.

Concluding Chapter: Summary and Discussion

This study examined factors restricting occupational expectations of young Japanese females. The analyses were based on the finding revealing that Japan was the only OECD member country where girls showed significantly lower occupational expectations compared to boys from the same country. The rationale for addressing this issue is grounded in the assumption that, if young girls do not aspire to pursue challenging occupations while still in school, it will become increasingly difficult for them to establish successful careers later on. From a macro perspective, failing to seriously address gender gaps in the labour market and support female careers would hinder Japan from fully harnessing its human capital, particularly in the face of a shrinking workforce and a sluggish economy.

The research involved both quantitative and qualitative investigations with distinct groups of analysis and covering different factors. The quantitative part in Chapters 3 and 4 utilised nationally representative data, including both female and male high school students, to conduct a comparative study between Japan and multiple countries, exploring gender disparities in occupational expectations and their influencing factors. Conversely, the qualitative part in Chapter 6, while comparing differences in their occupational expectations and influencing factors, focused solely on female university students studying in Japan and another country, the UK. Furthermore, these participants may not have necessarily represented the broader student demographics of their respective countries.

The factors covered in the quantitative and qualitative analyses also exhibited some deviations. For example, the interviews in Chapter 6 scrutinised topics that were not available as data, such as preferred profiles of future partners, gender-differentiated encouragement by parents, the influence of mothers' occupations as role models, and perspectives on measures related to WLB. In contrast, certain aspects broadly coincided, including academic competence, the impact of social class, as well as gender differences in labour and family roles.

While the topics covered in the interviews compensate for the data gaps in the quantitative analysis, the shared elements also contribute to a multi-dimensional understanding of the factors influencing the lower occupational expectations of Japanese girls compared to their male counterparts and girls from other countries. This holistic portrayal provides valuable insights into the complex dynamics shaping the occupational expectations of Japanese girls within the broader international context.

The main findings of this study encompass the following. Firstly, compared to boys, a smaller proportion of girls plan to attend four-year universities and their maths aptitude is generally lower, attributable to gender stereotypes suggesting that females require less educational competence. Secondly, parents in Japan tend to hold lower occupational expectations for their daughters compared to their sons, often based on the belief that females should prioritise family caregiving roles. Thirdly, Japan's gender equality landscape concerning labour issues and family roles remains one of the most conservative among developed countries, disincentivising females to envision career development. Fourthly, there is a notable absence of visible female role models in Japan, particularly mothers who successfully balance both career and family life. Lastly, flexible work arrangements that enable better WLB have not been widely used, as they are considered as unwelcome exceptions at the workplace. These factors collectively serve to discourage girls from pursuing ambitious careers, erode their confidence in striving for high-achieving vocations, and further limit the range of potential job opportunities. This concluding chapter verifies these findings by comparing them against the three theories of Circumscription and Compromise, Social Status Dependency, and institutionalised gender division in the labour market.

Applicability of the Theories

Circumscription and Compromise

Gottfredson's Circumscription and Compromise theory was tested in Chapter 3 to determine whether it explained the low occupational expectations of Japanese girls in considering individual factors such as occupational choices, educational expectations, and academic competency, all of which can be associated with gender-based identity. The examination also evaluated how social class from the micro/meso system impacts occupational expectations differently between genders.

Analysis of the PISA 2018 data revealed that, among 15-year-old high school students across 36 OECD member countries, the significantly lower occupational expectations of Japanese girls compared to boys were not observed in other OECD countries. Examination of the top 10 chosen occupations indicated that girls in Japan tended to opt for female-dominated occupations with low to mid-range ISEI scores, while boys preferred male-dominated occupations generally associated with higher ISEI scores, and none with low scores. The observed pattern in Japan indicates a strong alignment with the Circumscription and Compromise theory, suggesting that traditional societal expectations and gender norms play a role in shaping occupational choices among adolescents in Japan.

A Blinder-Oaxaca decomposition showed that the lower average ISEI scores of Japanese girls compared to boys were primarily due to a smaller proportion of girls planning to go to university and having lower average maths scores than boys. This may be due to the influence of parents who have traditional gender biases expressing lower need for education and academic achievement for girls. These attitudes stem from persistent gender role division, where males are viewed as breadwinners and females are expected to fulfil caregiving roles. This gender-differentiated cultural context could be playing a role in fostering low educational and occupational expectations, aligning again with the Circumscription and Compromise theory.

On the other hand, the decomposition showed that, if the proportion of girls planning to go to university or their average maths scores were the same as those of boys, there would be no significant gender difference in the average ISEI scores of their expected occupations in Japan. Furthermore, while both mothers' and fathers' occupations were found to elevate the occupational expectations of both genders, there were no significant gender differences in their effects. In other words, while social class impacts occupational expectations *per se* for both girls and boys, it does not play a role in generating gender differences in these expectations. This is in contrast to observations from the PISA 2015 data, which indicated that boys were more affected by their father's occupation than girls.

The theory was also investigated in the qualitative study of Chapter 6 through interviews with female university students in Japan and the UK. More specifically, its explanatory relevance was explored regarding distinctions in occupational choices and potential influence of various factors between the females in two countries. Topics encompassed individual characteristics, preferences, and perspectives, as well as parental influence from the micro/meso systems, and the availability of role models, societal gender norms, and work conditions for women from the exo/macro systems.

The results indicated that interviewees in the UK generally held higher occupational expectations than those in Japan, with many anticipating careers in STEM fields, which was not the case in Japan. While the interviewees in Japan did not necessarily gravitate towards typically female-dominated occupations, a few admitted that they would have aimed higher if they were a boy, a viewpoint not observed in the case of the UK.

Furthermore, it also became evident that in Japan, several parents of the interviewees would have encouraged higher occupational expectations if their children had been boys—a trend mostly unobserved in the UK, with only a few exceptions. In contrast, some parents of interviewees in the UK held great expectations for their daughters to pursue careers as doctors or lawyers, especially when the mothers held prestigious occupations. This dynamic was not prominently observed in Japan, except for one interviewee who consistently received encouragement from her parents to become a doctor.

At a broader level, interviewees in Japan or those with Japanese roots were more vocal than the interviewees in the UK regarding the prevalence of traditional gender norms upheld by relatives, media, and society. Besides the emphasis on women's roles within the family, some interviewees highlighted instances of overt discrimination or demeaning remarks towards women, a concern less frequently mentioned among interviewees in the UK. The impact of direct and subliminal messaging over the years in gradually diminishing occupational expectations among Japanese girls can only be assumed. Furthermore, this assumption could also extend to the counterbalancing pressure that males presumably face in achieving professional success and being the breadwinner for the family.

Regarding social class, quantitative analysis, using the universities attended by the interviewees as proxies as well as the educational levels and occupations of their parents, revealed a clear impact on occupational expectations among those in Japan, and to some extent, those in the UK. While the transmission of social class, in general, may be a societal concern as an equity issue, the perspective of occupational expectations takes on a different dimension. While females who have parents with higher education and occupational SES now expect occupations with higher SES, it can be interpreted as progress compared to the past where women from higher social class could only attain social status through assortative marriage which relied on their husbands, instead of through their own achieved occupations.

In summary, Gottfredson's Circumscription and Compromise theory aptly explains the low occupational expectations of Japanese girls. In Chapter 3, it aligned with gender-based occupational choices, as well as the factors of lower educational expectations and maths achievement that are associated with cultural norms on gender role division. The qualitative study in Chapter 6 reinforced these findings, highlighting the influence of gender-differentiated parental expectations and a general persistence of traditional gender norms on female roles in occupations and family life. On the other hand, while quantitative analyses in Chapters 3 and 6 showed that social class impacts occupational expectations particularly among Japanese females, the theory is not used to explain *gender differences* in the occupational expectations.

In terms of consistency with related literature, the findings of Marini & Greenberger (1978), Vella (1993, 1994), and Gutman *et al.* (2014), which illuminate the evolving impact of mothers' occupations on daughters' expectations, helps explain the evolving occupational expectations observed among career-oriented interviewees in Japan. On a broader exo/macro level, the study by Stuth's (2023) in Germany and a longitudinal study in Australia by Berge *et al.* (2020), examining how societal norms on gender circumscribe career choices, align with the applicability of Gottfredson's theory to Japanese females. Additionally, Adachi's (2012) study in Japan, which delves into societal perceptions that influence career choices, particularly the belief that STEM fields are more suitable for males, resonates with the observed lack of STEM occupations among both the larger PISA sample and the interviewees in Japan. These studies contribute to understanding how external factors shape career aspirations and choices within a given cultural context.

Women's Social Status Dependency

The theory of women's Social Status Dependency was examined in Chapter 6 to assess whether the interviewees based their future occupational choices on the assumption of gaining social status or earning a living through a future partner. Results showed that, with the exception of one interviewee who expressed no interest in becoming a breadwinner, most interviewees in Japan did not strongly indicate a reliance on their future partners for their social status. This was the case even though the majority of them were raised in conventional households where the father served as the primary breadwinner, except for those whose parents were either both academics or both national civil servants. Instead, many expressed a preference for a dual-income couple, sharing household chores and child-rearing responsibilities, a departure from the practices of their parents.

On the one hand, it was noted that several parents or relatives of the interviewees held views suggesting that females should be responsible for the family and males should be breadwinners. This perspective clearly aligns with the Social Status Dependency Model, although the extent to which it has restricted the occupational expectations of the interviewees remains uncertain. Again, it is essential to take into account the opposing expectation that males face, being compelled to take on the role of the family's primary provider and head of the household.

In contrast, the inclination to choose one's occupation independently from a prospective partner's income or occupation was more evident among the interviewees in the UK. Notably, some even contemplated having children without a partner or envisioned their partners taking on the role of stay-at-home parent. Furthermore, many were more vocal regarding the equal sharing of household chores and active participation in child-rearing. In addition, none of the parents of the interviewees in the UK appeared to expect their daughters to be dependent on their future husbands, except for one. In fact, some parents were unenthusiastic about their daughters getting married or having a long-term partner, even though they desired to have grandchildren.

In summary, while the Status Dependency theory may explain the broader national trend of lower occupational expectations for Japanese girls compared to boys, its explanatory power may be limited when applied to female university students. This limitation becomes apparent as the interviewed students in Japan appeared less inclined to choose occupations with the expectation of achieving social status through their future husbands. On the other hand, it is essential to note that this tendency could be attributed, at least in part, to the sample selection, where volunteered interviewees were likely to be more career-oriented than Japanese female university students at large. In other words, the voluntary participation of these individuals suggests proactive interest and possible awareness of the evolving landscape, such as the increasing prevalence of women with careers, unmarried women, rising divorce rates, as well as declining salary levels and heightened instability in male employment. Nonetheless, while the Status Dependency theory may clarify the general trend of lowering occupational expectations among Japanese females, its relevance to more educated girls necessitates nuanced examination and further investigation into its applicability.

In the context of relevant literature, the findings from discussions by Goldin (1992, 1995) and Behrman *et al.* (1986) on female university enrolment in the USA, spanning from the early 1900s to the 1970s, resonates with the experiences shared by some interviewees in Japan. While the parents of these interviewees placed value on university education, it was not mainly for the purpose of pursuing a career but rather to secure a favourable marriage. Additionally, the study conducted by Brinton *et al.* (2021), which highlighted Japanese women's consistent preference for men with higher incomes and, at least, an equivalent level of education, serves as clear evidence of the Status Dependency Model. However, it is crucial to disaggregate this data to

discern whether different patterns exist among highly educated and career-minded women, as suggested by the insights gained from the interviews. Further exploration is needed to understand how these dynamics play out among women with aspirations beyond traditional gender roles.

Institutionalised Gender Division in the Japanese Labour Market

The relevance of the theory on institutionalised gender division in the Japanese labour market was assessed in Chapter 3 against the top occupational choices of girls and boys. The results showed that the top choices for girls mainly included female-dominated occupations with low to mid-level ISEI scores, such as nurses, childcare workers, and teachers, or those prevalent in non-regular employment, such as general office clerks. These occupations are more conducive to shouldering the primary responsibility for family caregiving. Conversely, boys tended to gravitate towards traditionally male-dominated occupations such as architects, IT programmers, and engineers, often associated with higher ISEI scores and reflective of a pattern where men pursue professions with higher perceived social status. The substantial proportion selecting generalist roles in the management track, traditionally designed for males to ensure lifelong employment but often involving excessive working hours, further validates the theory.

The theory was tested in Chapter 4, revealing a trend of increasing average ISEI scores for girls compared to boys as the gender equality landscape of countries progressed. Conversely, this indicated that the significantly low occupational expectations of Japanese girls were related to the large gender wage gap and low share of female managers in Japan, as described by the theory — women being relegated to lower-paid non-regular employment and scarcity in managerial positions. Furthermore, results also showed that relatively low occupational expectations are correlated with the short time Japanese men spend on household chores. The theory remains applicable as it points to the prevalence of men working excessive hours, naturally diminishing their involvement in household responsibilities, and consequently transferring the burden onto women. Finally, results showed that the positive view on being a housewife also reduced the occupational expectations of girls compared to boys. This could be explained by the situation described by the theory, which prompts more women to validate their role by embracing the perception that being a housewife is personally fulfilling.

The theory was then considered in Chapter 6 to assess how the interviewees perceived the gender-related characteristics of the labour market in Japan, UK or Europe, and to what extent these perceptions influenced their occupational expectations. Many of them in Japan referred to blatant discrimination in the work place, lack of role models, long work hours, and difficulties in WLB, particularly in raising children. This was in stark contrast to interviewees in the UK, who were able to identify role models and did not express significant concern over maintaining WLB during childrearing, although some were apprehensive about disadvantages in promotions and low income.

In particular, the interviews in the UK unveiled the existence of role models who were female professionals raising children in their expected occupations, including scientists, doctors, barristers, and academics. Conversely, in Japan, the absence of such role models with successful careers and balanced family life was inducing anxiety among some interviewees regarding their potential occupations as lawyers or doctors. More specifically, interviewees in Japan expressed concerns about continuing their careers while maintaining WLB when their children are young, even in taking maternity/parental leave or working reduced hours. Despite being aware of the entitlements, they were concerned about potentially becoming a burden or facing underappreciation from colleagues for working less. However, these issues were not voiced by

the interviewees in the UK, although many criticised the short duration of paternity leave as a legal provision.

At the same time, only a few interviewees in Japan had intentionally adjusted their occupational choices to adapt to the challenging conditions in the labour market for women. The exceptions were those who chose roles such as a certified accountant, administrative assistant, or tax official in the civil service to manage WLB conflicts. The reason why there were so few could be due to several factors: many are far from having children to imagine the full extent of the challenges; the sample is biased towards career-minded female university students who are confident or optimistic in pursuing their ideal occupations by overcoming the challenges; and they are aware of the gradual improvement in policies and practices for WLF.

In conclusion, the theory of institutionalised gender division in the Japanese labour market provides a persuasive framework for understanding the low occupational expectations of Japanese females relative to boys within the broader sample. In particular, the significant gender wage gap and the positive views attributed to housewife roles in Chapter 4 were key features of the theory that had explanatory effects. However, Chapter 6 showed the need for nuancing, as career-minded female university students may maintain optimism in pursuing their ideal occupations despite the challenging labour market characteristics. This indicates variations in the theory's applicability across the different female demographics, as well as the need to contrast with the counterpart males to revert to the key issue of gender differences.

In relevant literature, Yamaguchi (2017)'s elaboration of the historical practice of trading excessive overtime for lifetime job security, rooted in the assumption of housewives managing family responsibilities, was still practiced by the parents of the interviewees in Japan. For the interviewees themselves, the insights provided by Hochschild & Machung (2012) and Hattori (2015) regarding the dual burden of professional and familial responsibilities borne by women closely align with the concerns expressed during the interviews. The descriptions by Hattori and Nagase (2003) outlining the division between regular and non-regular employees, corporate culture, and the prevalence of excessive overtime influenced the occupational choices of several interviewees in Japan.

The perspective of Nagase (2022) on these labour practices, emphasising the considerable power that employers wield with unrestricted control over job assignments, workplace locations, and working hours, further underscored elements discouraging the interviewees from selecting specific occupations or institutions. This contrasted starkly with the experiences of interviewees in the UK, where individuals enjoyed greater freedom in choosing their desired occupations. Moreover, the observations articulated by Takeishi (2011) regarding the low utilisation and inflexibility surrounding WLB systems in Japan resonated with the challenging views held by the interviewees as they envisioned the progression of their careers within their chosen occupations. In contrast, the safeguarding of a top-heavy core workforce comprising older, highly paid male workers, as discussed by Houseman & Osawa (2003), was perceived to be gradually eroding in today's Japanese society.

Discussion

The above elaborated on how the three theories of Gottfredson's Circumscription and Compromise, the Social Status Dependency, and the institutionalised gender division in the Japanese labour force all provided comprehensive insights into the relatively low occupational expectations of Japanese females among nationally represented high school students. Table 7.1 summarises the findings.

Table 7.1: Applicability of the Theories

Circumscription & Compromise						
	Gender			Social Class		
	Applied		Not applied	Applied	Not applied	
Chapter 3	Japanese girls premainantly chose low-mid ISEI female-dominated occupations	Japanese boys chose male-dominated occupations mid to high level ISEI	Lower educational aspiration and maths scores than boys reduce ISEI	Girls and boys planning to go to university have similar ISEI	Mothers and fathers' occupations affect ISEI of girls and boys	Unlike in PISA 2015, father's occupation does not affect ISEI of boys more than girls
Chapter 6	Average ISEI of interviewees in Japan is lower than that of the UK, with few STEM occupations	Interviewees in Japan admitted that they would have aimed higher if they were a boy	Japanese parents encouraged sons more, while some parents in the UK had high expectations for daughters	Not many intereviewees in Japan opted for female-dominated occupations with low to mid ISEI	Mothers and fathers' education and occupations had effects on ISEI of interviewees in Japan and UK	More encouragement for boys was across all social class
Social Status Dependency						
	Applied			Not applied		
Chapter 6	Some parents said females should take care of the family and males be breadwinners, whereas this was rare in the UK			Most interviewees in Japan were not relying on a future husband, although the sample was career-oriented and interviewees in the UK were more independent females		
Institutionalised gender division in the labour market						
	Applied			Not applied		
Chapter 3	Girls chose occupations prevalent in non-regular jobs, qualified occupations condusive to WLB, or to become a housewife		Substantial proportion of boys chose male-dominated management tracks involving long hours or prestigious professions	Of girls planning to go to university, 8% chose management track and 3% doctor		
Chapter 4	Low occupational expectations of girls relative to boys in Japan correlated with the poor gender equality landscape					
Chapter 6	Many interviewees in Japan were concerned about discrimiation and WLB when child raising, while those in the UK were less worried		Interviewees in Japan did not see role model women who balanced profession and family in their occupations while those in UK did	While some interviewees in Japan adjusted their occupations to ensure WLB, others were optimistic in pursuing their interested path		

The new contribution of this research to the academic literature is evident in several key findings. The study exposes Japan as an anomaly among developed countries where girls exhibit significantly lower occupational expectations than boys. This substantial gender disparity is attributed to a smaller proportion of girls planning to attend university – one of the few among

developed countries – and having lower maths scores than boys. These factors are potentially influenced by parental discrimination, favouring sons' education, and societal stereotypes discouraging girls from excelling and working in STEM fields. In-depth interviews reveal that Japanese parents, unlike their European counterparts, often fail to encourage girls to aspire to prestigious occupations, contributing to the observed disparities.

Furthermore, the study sheds light on the counterproductive challenge of a noteworthy proportion of girls planning to become housewives, even among those intending to attend university. This poses a significant human capital loss to the economy, particularly considering that Japanese females are top class in PISA maths and science tests as well as international skills assessments such as PIAAC (OECD 2019a; Komatsu 2021). The research highlights that occupational expectations of young females could also be diminished due to unfavourable labour practices and ineffective WLB measures, revealing that flexible work for full-time employees remains uncommon in Japan, compared to the UK where it is becoming the norm.

On the other hand, the research unveils diversity among groups of females, demonstrating that girls with university plans or similar maths scores as boys have comparable occupational expectations. Furthermore, while social class – measured by the parents' education and occupations – influences the occupational expectations of both genders, it does not significantly contribute to the gender difference. This suggests a shift in girls from higher social classes aiming to achieve social status, mostly or partly, through their own occupations, as opposed to depending solely on their future husbands, challenging traditional gender norms.

In summary, this research provides a multi-dimensional perspective on micro/meso and exo/macro factors contributing to the reduced occupational expectations of Japanese females. While acknowledging the need for nuancing among younger, university-educated, or career-minded females, the research serves as a wake-up call, highlighting Japan in an international context where underutilising competent female human capital constitutes a significant loss to the economy and society, setting it apart from other developed countries.

The Way Forward

Given the above findings, it is essential for Japan to leverage its pool of competent females to address critical challenges such as a shrinking workforce, high fiscal debt, a sluggish economy, and low productivity. This underscores the need for a comprehensive approach to implementing strategic measures that can propel Japan towards a more sustainable future.

Specifically, in terms of WLB in Japan, reviews of policies and their implementation reveal that their effectiveness has been modest. While the government has recognised the challenges through initiatives like limiting overtime work and encouraging paternity and parental leave for fathers, a fundamental shift in corporate culture is imperative. This transformation should prioritise productivity per hour as opposed to traditional metrics like daily or input-based assessments and should reward effective human resource management practices. Therefore, it is worthwhile to draw lessons from the UK and other countries where the normalisation of flexible work arrangements has shown promise.

Additionally, measures that may disincentivise women from working or pursuing careers in challenging occupations need to be addressed. While not extensively emphasised in this research, this includes a fundamental reform of the social security system, which should require at least pension contributions from unemployed or underemployed dependent spouses (Nagase 2003, 2023a, 2023b). Moreover, the income tax system, currently based on a single male breadwinner and a secondary earner wife, should be replaced with a dual income model, aligning with the practices of most other developed countries (Nagase 2011a, 2011b, 2021; Yamaguchi 2017).

Meanwhile, a more direct effort to enhance the occupational expectations of Japanese females is called for. Both the government and the education system must communicate this message to students, parents, the media, and society at large: the traditional model of the male breadwinner and part-time wife is no longer financially viable for a comfortable lifestyle (Dohi 2020), nor is it fiscally sustainable for the country. It is crucial to inform them of the inevitable transition to a dual-income household as the default, where both spouses work full time and husbands take on a greater share of childcare and household chores. The public sector should lead by example in implementing this model, setting the stage for the private sector to follow suit.

Schools, particularly starting as early as kindergarten, should play a pivotal role in eradicating gender stereotypes associated with occupations (Brussino & McBrien 2022). This can be carried out by introducing role models who pursue non-traditional careers, such as male nurses and female nuclear scientists. These initiatives can inspire students to envision their future careers, free from the unnecessary circumscription of gender bias, allowing their interests and skills to flourish uncompromised.

It is equally important for schools to educate parents about the evolving global economy, which is increasingly rewarding human talent and skills. In this changing landscape, where success and sustainability hinge largely on individual capabilities, parents should discourage daughters to rely on future husbands for livelihood and social standing. Instead, they should guide them to aspire occupations that align with their passions and offer self-sustainability. While not covered extensively in this study, the media also bears responsibility in shaping societal perceptions through perpetuating stereotypes or promoting role models, thereby influencing young women's occupational aspirations (Ward & Grower 2020) (see Box 7.1).

Box 7.1 The Role of Media

The media plays a pivotal role in either perpetuating outdated gender stereotypes or showcasing professional women as role models. In Japan, television programmes often fall short in representing women across various occupations, be it in commentary, documentaries, or fictional dramas. Notably, both private broadcasting companies and NHK adhere to ethical standards regulated by the Broadcasting Ethics & Program Improvement Organization (n.d.); however, these standards currently lack specific guidelines aimed at promoting balanced representation and diversity, including gender (The Japan Commercial Broadcasters Association n.d.; NHK 2009).

In contrast, the British Broadcasting Corporation (BBC) has responded to the requirements by the UK's Office of Communications (OfCom) by developing a Code of Practice for Representation, Portrayal, and Diversity (BBC n.d.a, n.d.b) in 2018. This code emphasises the importance of achieving gender balance and reflecting diversity, including disabled individuals, ethnic minorities, and lesbian, gay, bisexual, transgender, queer or questioning communities in its broadcasting content. Furthermore, the BBC has established specific targets for women's representation both on air and in lead roles, providing clear directives to production partners on how to meet these objectives. To fulfil this mandate, the BBC annually reports its progress on the Code of Practice (BBC 2022) to OfCom, which subsequently shares its assessment of the BBC's performance with the government and the public (Ofcom 2022).

Japan's BPO could consider adopting comparable codes and targets for Japanese broadcasting companies, beginning with NHK, particularly regarding the portrayal of professional women. Additionally, relevant companies could be obligated to submit annual progress reports which should be open to the public. Through these measures, portrayal of women in skilled professions could be enhanced in the media. This, in turn, could provide role models and contribute to inspiring young females to aim for challenging occupations in the future.

Moreover, financial and career education in schools should be prioritised (Maeda 2017), recognising its crucial role in preparing both girls and boys for the complex economic realities of adulthood. This education should equip them with essential knowledge about various facets, including the lifetime cost of living, income disparities across occupations, the substantial expenses associated with raising children, the prevalence of divorce and single-parent households, as well as critical financial aspects involving social security, unemployment, and pensions (Noda 2019).

Most importantly, career education should underscore the evolving nature of the economy, emphasising that dependence on a single earner is no longer a viable option. In light of the inevitable necessity for two full-time incomes to attain financial comfort, schools should actively encourage young females to consider long-term career paths and strive for economic independence. This empowers them to make informed choices about their future occupations and financial well-being, which ultimately enhances productivity and economic sustainability of the nation.

Future Considerations

In contemplating the future, it is important to consider evolving global trends that could significantly shape occupational expectations. One prominent aspect is the escalating influence of social media and school-facilitated work-related experiences. The 19th Longitudinal Survey of Newborns in the 21st Century (2001 cohort) complements the understanding of conventional factors discussed in this research. This national survey¹⁷ queries 17-year-olds who have selected a future occupation about their influences, allowing for multiple answers (see Table 7.2). While the genders are combined, the highest influence was from media, encompassing social networking services, TV, internet, magazines, and so on, at 24%, followed by work exposure, internships, and other school-related experiences at 23%. Parental recommendations rank third at 19%, followed by discussions with friends and seniors at 15%, ahead of parents as role models at 12% (MEXT 2021a).

Table 7.2: Influence on Occupational Choice of 17-Year Olds

#	Influence	%
1	Media (TV, internet, magazines, etc.)	24%
2	Work exposure, internships, etc. at school	23%
3	Parents' recommendations	19%
4	Discussions with friends and seniors	15%
5	Parents as role models	12%
6	Occupational aptitude tests	6%
7	Volunteer activities	6%
8	Job vacancy information	6%
9	Others	38%

Source: 19th Longitudinal Survey of Newborns in the 21st Century (MEXT 2021a)

While the occupational expectations of these 17-year-olds may still evolve as some of them proceed to university and face the harsh reality of the competitive labour market, these influential means, including social networking services and work exposures, are a modern and sobering

¹⁷ The questionnaires were completed by both the 2001 cohort and parents starting from the 13th survey. While the first survey received 47,010 responses, the 19th survey had 25,504 responses. Furthermore, the survey does not ask specifically what kind of occupations the respondents are envisioning. While numerous surveys focus on the aspired or expected occupations of youths, as explained in Chapter 1, not many inquire about who or what influenced their choices.

reality that could nevertheless directly provide ideas to these youths. Although these topics were covered in the interviews of female university students, they were not discussed extensively in this research due to the need for prioritisation and relevance in understanding the relatively low occupational expectations of Japanese females. However, these topics deserve more attention in future research endeavours.

In contemplating their future occupations, young women should consider three additional global trends. Firstly, they will face the challenge of escalating international competition in the labour market, propelled by the increasing interconnectedness of economies and the accessibility of skilled workers worldwide. This evolution places significant pressure on individuals to continually enhance their skills and adapt to evolving demands to remain competitive. Given that university graduates can be sourced from any part of the world (Lauder & Mayhew 2020), it implies that Japanese graduates are in direct competition with counterparts from the large populations in China and India for employment opportunities. In fact, Conrad & Meyer-Ohle (2019) highlight a growing trend of major Japanese corporations hiring foreigners graduated from both Japanese and overseas universities.

The second facet revolves around the imminent threat of job displacement caused by artificial intelligence (AI), particularly in physically demanding or low-skill occupations such as secretarial work, where routine tasks are poised to be automated. According to OECD (2019d), professions in fields such as finance, medicine, and legal activities, which require extensive education and rely heavily on accumulated knowledge and experience, may also become susceptible to automation by AI. Simultaneously, as AI becomes more pervasive, new occupations will emerge to design, maintain, and supervise these systems. This highlights the importance of women to continuously stay informed and enhance their skills in AI technology and robotics.

The third facet concerns the expanding scope of flexible and remote work, propelled by advancements in IT and the lessons drawn from the Covid-19 pandemic. According to the CAO's survey on the effects of Covid (2023), teleworking has increased from 10% to 30% nationally and 18% to 52% in Tokyo between December 2019 and March 2023. The OECD (2019e) states that emerging technologies hold the potential to grant individuals greater flexibility in determining where, when, and how they work, which can enhance WLB and open up new opportunities in the labour market. At the same time, whether these types of surge is temporary or lasting depends on the balance of advantages and disadvantages for both workers and businesses. While teleworking has the potential to boost productivity and WLF, its overall impact remains ambiguous (OECD 2021b).

Moreover, this evolving landscape in IT and remote work may pave the way for new employment models, such as freelance work and outsourcing, which have the potential to enhance WLB for women. At the same time, it is crucial to remain attentive to the potential pitfalls of this transformation. The expansion of the gig economy could result in intense competition, driving wages to 'race-to-the bottom' and leaving workers without essential social benefits and safety nets.

Despite the above new challenges in the labour market, in line with the original intent of this research, it is paramount to underscore that Japan may lag behind in an increasingly globalised world, if it fails to fully harness the potential of half its human capital. As elucidated in this study, Japanese females demonstrate an extremely high level of competence and skills in international assessments. Consequently, restricting opportunities for females to reach their maximum potential in economically productive activities represents a suboptimal approach for the nation's economic recovery, fiscal balance, and long-term sustainability. Thus, it becomes imperative for the public sector, politicians, private sector, and educational institutions to collectively convey

this message and encourage young girls to aspire to challenging occupations, all while providing the necessary support to help them realise their ambitions.

Limitations and Further Research

This study has several limitations. First, the concept of occupation is somewhat different in Japan compared to many other developed countries. The distinctness of the Japanese labour market, characterised as the 'Membership Type', which involves hiring generalists to be rotated among different posts in organisations, contrasts with the practices in other nations where students often take up specialised occupations, known as the 'Job Type.' Therefore, many Japanese students expect to become company workers or civil servants in general, rather than pursuing specific job types, unless they are occupations that require certifications or qualifications. However, as the SES of occupational types is more or less similar when it comes to career-tracked posts or secretarial-type jobs, it is still possible to compare the differences in SES of the expected occupations of girls and boys.

Second, in Chapters 3 and 4, the analysis was confined to samples of students who provided information on their expected occupations and indicated their parents' educational levels and occupations. While the study aimed to compare like-to-like students between Japan and those of other OECD countries, it acknowledges that the sample may have been biased towards students living with both parents. Therefore, the study cannot assert that these students are fully representative of *all* 15-year-olds.

The third limitation pertains to the range of countries included in the analysis for the gender equality landscape variables in Chapter 4. With sample sizes ranging from 32 to 36, there may be restrictions in confidently generalising the relationships observed with the ISEI score ratios. To address this concern, future research could expand the number of countries for the analysis by incorporating middle-income nations that provide reliable and pertinent country-level data on gender equality.

The fourth limitation relates to the interviewees in Chapter 6, who may not necessarily represent the broader population of female university students in Japan and the UK. These individuals volunteered to share their insights and perspectives on their careers, suggesting that they might have been more career-oriented than the average student. Additionally, while the interviewees came from geographically diverse universities, many of these institutions were competitive and/or located in relatively large cities. Consequently, it is reasonable to assume that the interviewees were potentially more progressive in their views on gender issues in both countries. Additionally, the UK's educational system requires students to choose their university majors at around 16 years old, prompting them to specialise early, as most bachelor's degree programmes last three years. In contrast, Japanese students typically decide on their major later, enter broader academic departments, and spend four years to obtain a degree. Moreover, the diversity in nationalities and ethnicities among the UK interviewees and their parents, including individuals with one or two Japanese parents, introduced complexity when attributing cultural influences.

Nonetheless, this research significantly advanced the understanding of low occupational expectations among Japanese females, highlighting the anomaly among developed countries. The study also underscored the need for nuancing concerning girls planning to go to university or career-minded female university students. Additionally, it revealed that fundamental changes in labour practices and improvements for WLB are still necessary to better harness the capabilities of competent Japanese females for the economy.

In terms of future research, while this study focussed on female occupational expectations, assuming their significance for eventual career achievement, it remains necessary to establish

this relationship by examining the actual occupation attained. Consequently, a large-scale longitudinal study tracking the expected occupations of 15-year-olds and their actual occupations at the age of 30 would be highly valuable. Based on the results obtained, it would then be crucial to thoroughly examine the myriad factors that either facilitate or hinder females in achieving their expected occupations, especially when compared to their male counterparts.

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Acknowledgements

The long yet fulfilling nine-year journey to the completion of my study would not have been possible without the unwavering encouragement, support, and generosity of numerous individuals. Foremost among them is Professor Nobuko Nagase, to whom I owe my deepest gratitude. She took a bold leap in accepting me as her student, even though I only had a vague idea for my research topic—a comparative study on media representation of professional women between Japan and France. In addition, at the time, I was working for the OECD in Paris in an entirely different field. Throughout these years, Professor Nagase has been a patient guide, teaching me how to navigate the intricacies of labour economics, regression analysis, academic writing, and much more.

My sincere appreciation extends to my thesis review members, Professors Aya Wakita, Isamu Sugino, Junko Nishimura and Masahiro Omori, who kindly and gently provided basic and crucial missing elements as well as detailed corrections on the model formulas – potentially, these shortcomings could have impeded the thesis from passing.

I extend my sincere thanks to my seniors and peers in Professor Nagase's seminar, who openly shared their experiences in manoeuvring the complexities of the doctoral path and providing continuous support. The same appreciation goes to Professor Susumu Imai of Hitotsubashi University who leads a weekly informal econometric study group to which I belong. He not only demonstrated an interest in my research but also shared valuable expertise, sparing his precious time. Special thanks are owed to Professor Yukiko Abe of Hokkaido University, who gave me vital advice when I was lost in my analysis for Chapter 4. I am also thankful to Dr. Miyuki Taniguchi of Saga University and Dr. Kazuko Nakata of Setsunan University for their indispensable help in conducting interviews with female university students.

A heartfelt appreciation is reserved for the 48 interviewees in both Japan and the UK who took the time to share their stories and review my documents. In this context, I would like to acknowledge my former OECD colleagues, friends, and their acquaintances who played a pivotal role in recruiting the interviewees and supported my endeavours throughout the entire process.

Needless to say, I am immensely grateful to my family members—my husband, our twin daughters, and their nanny—who endured my frequent absence. I am also thankful to my father, who diligently handled the university's administrative procedures on my behalf. However, I want to pay my profoundest tribute to my mother, who sadly and suddenly passed away exactly a year ago, despite eagerly looking forward to celebrating my graduation.

Kazuko Miyamoto, born into a modest Buddhist monk's family, overcame financial challenges after the war by securing a scholarship from a temple to attend high school and making her own shirts from bedsheets. Following her graduation, a stint in office work, and marriage to my father, she pursued a degree at a junior college. Upon our return from a posting in 1960s London, where my father was stationed for work, she authored a book detailing our experiences there, which was a novelty at the time.

Simultaneously, she undertook a course in consumer affairs to embark on a new career working at the National Consumer Affairs Center. She had a full-time job with a non-regular contract which allowed her to return at 6 pm to prepare dinner for me and my brother. Upon our move to New York for my father's second posting in the 1970s, she transitioned into a correspondent role for agricultural and consumer-related magazines, providing informative reports on diverse developments in America. She also published a book on American women with careers, along

with another one advising how Japanese women can also work and have a family, which was also translated into Korean.

As a university student in the 1980s, I began to grasp the nature of her work. Her focus encompassed establishing safety standards for consumer products, including toys, electric blankets, child-proof caps for medicine bottles, and more. Additionally, she dedicated efforts to raise awareness about the health risks of asbestos exposure among workers and residents. Her objective was to enhance the safety and well-being of citizens by introducing advanced regulatory standards from the US to Japan. Amidst these endeavours, she managed to earn a law degree while actively contributing to her professional responsibilities.

Years later in the 90s, during my posting in Washington DC, I accompanied her research mission to the US Department of Transportation, where she interviewed officials on automobile crash tests, a measure not yet implemented in Japan at that time. We also visited an NGO campaigning against hormones in milk products and genetically modified food. Subsequently, when I moved to Paris, she also came, but not to go on tourist spots like the Eiffel Tower or acquire luxury bags from Louis Vuitton. Her destination was Parc Monceau, just down the road, where we examined the cork flooring in the children's playground — a safety measure required by the French government to prevent potential injuries to young children.

Beyond trying to establish regulations over consumable goods, my mother actively pursued the modernisation of Japan's governance systems. She played a key role in advocating for the country's information disclosure law for the public sector, drawing inspiration from the American Freedom of Information Act. Additionally, she authored a book on establishing a whistleblowing system to protect employees from harm in exposing unethical practices. Over time, her commitment to these causes led to a role as a university teacher, and she later retired as a full professor. At the end of her career, she served as an ethics board member of a major Japanese automobile company, visiting car manufacturing factories.

However, there were many downsides as well. Due to a scheduling conflict, she could not attend with my father the school play where I played the lead role. Instead, she ordered a tailor-made red dress and simply imagined how I would perform in it. Furthermore, my father, a journalist who was generally exempted from excessive overtime as discussed in this thesis, rarely contributed to household chores or cooking. Therefore, I vividly recall instances of my mother collapsing under the strain of balancing work and family responsibilities. She also experienced facial nerve paralysis for half a year attributed to workplace power harassment.

I had never considered my mother to be my role model due to our divergent professional paths. My determination to help developing countries emerged around age 14, well before fully understanding the nature of her work. The idea of working and raising two children had also been long part of my plan, predating the start of her career. So it was not until her departure that I finally realised that she had passed on her DNA to me in the form of a strong sense of obligation to contribute towards creating a better world for future generations.

With over 30 years of professional experience in development aid, I also hold a firm belief that Japanese women enjoy far more liberty than their counterparts in developing countries. I have witnessed women in poverty, being stripped of the freedom to go to school, live in hygienic conditions, work outside the home, choose their husbands, decide how many children to have, or avoid the horrors of female genital mutilation. Therefore, I hope that Japanese women, endowed with abundant opportunities, will fully leverage their capabilities to strive towards improving the society they belong to. May they transcend traditional roles, following the path laid down by my mother.