

# The Effect of Career Development on Labor Market Outcomes: Focusing on Gender Differences

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## ABSTRACT

The purpose of this study was to examine how career maturity and career decision self-efficacy affect later labor market outcomes. In addition, the study aimed to assess whether gender is a significant factor to influence the associations between career development in late adolescence and labor market outcomes in the late 20s. The study analyzed data from Youth Panel Survey (YP) collected by the Korea Employment Information Service. The study utilized information from 778 respondents that were collected in 2008, 2010, and 2020. The study found that the level of career development continued to improve during high school and college, and the level of career development in college was a significant factor affecting labor market outcomes in the late 20s. In addition, there were gender differences in the associations between career development and labor market outcomes. The results suggested that intervention in career development during emerging adulthood might improve individuals' labor market outcomes. In addition, the career path for women seems to be more about work and family balance than that for men.

## KEY WORDS


Career development, Labor market outcome, Employment status, Wage, Gender

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## 1 | INTRODUCTION

Adolescence is an important phase in life in which individuals prepare for adulthood. Career development is an important task for adolescents, who are expected to develop career goals and ways to reach them, thereby achieving self-sufficiency in adulthood. Public interest and support for career education from childhood to adolescence are based on the belief that career education positively contributes to career development and, eventually, job achievement. Previous studies found that career experience in adolescence positively contributed to attitudes and knowledge related to career development tasks, such as career decision self-efficacy, career competency, and vocational value (Cho & Hwang, 2014; Kim H.S. & Yang S.H., 2012; Kim K.H. et al., 2014).

The school-to-work transition is a critically important juncture in the life course (Schoon & Silbereisen, 2009), with adolescence considering as the primary preparatory period (Shanahan et al., 2002). Employment problems at this time of life may diminish job-related confidence, lower expectations, and reduce future prospects. Difficulties in establishing oneself in the labor market can result in the loss of opportunities for on-the-job training and other work socialization that enhances human capital, employment stability, and occupational attainment (Corcoran & Matsudaira, 2005; Hamilton, 1990; Vuolo et al., 2014). However, few empirical studies have examined whether career maturation has a positive effect on young people's entry into the labor market and their subsequent job experience. Therefore, it is important to investigate whether adolescents' career maturity and career decision self-efficacy contribute positively to their labor market performance in early adulthood.

In addition, this study considered gender a significant factor that may affect career development and later labor market outcomes. Vuolo et al. (2014) indicated that gender may affect educational attainment and career building during the transition from school to work. Even though young women's educational attainment and career identities have shifted in recent decades (Goldin, 2006; Johnson, 2002) and more young women have completed college and achieved highly competitive jobs, it is still widely accepted that men will be the economic providers for their families (Johnson et al., 2001). Thus, women can view their work as a more tentative pursuit since they expect to reduce work involvement

as their family needs increase. In particular, women who do not have highly fulfilling jobs with high rewards and stability and those who perceive structural barriers in the labor market based on their gender may tend to draw them back from the labor market (Kim Y.S. et al., 2019).

Previous studies did not report consistent findings regarding gender differences in career maturity or career decision self-efficacy in adolescence (Park & Lee, 2021). However, when considering career development a progressive dynamic process of maturation and adaption (Jepsen & Dickson, 2003), it may be worth assessing whether the process of career development during the school-to-work transition may differ by gender.

The purpose of this study was to examine career development continuity by describing changes in career maturity and career decision self-efficacy during the school-to-work transition and how career maturity and career decision self-efficacy affect later labor market outcomes. In addition, the study aimed to assess whether gender is a significant factor that influences the association between career development in adolescence and later labor market outcomes. This study had three objectives. The first was to describe the changes in career development after entering college. Second, the study tested the hypothesis that career development is positively related to labor market outcomes such as employment status and wages in individuals' late 20s. Third, we examined whether the relationship between career development in high school and college years and labor market outcomes in the late 20s differed by gender. Understanding how career development in adolescence affects future labor market performance and whether these relationships are altered by individual factors such as gender will contribute to providing practical and policy implications for young people transitioning from school to work.

## 2 | LITERATURE REVIEW

### 2.1 | Career Development in Adolescence

Career development or career maturity can be seen as a multidimensional concept that comprehensively encompasses specific actions and emotional or cognitive states related to one's career path (Roh, 2013). The concept of career

maturity was proposed by Super (1963) more than 50 years ago. In the context of developmental theories, Super (1963) viewed career as a series of developmental stages characterized by specific tasks. According to Super (1963), individuals are mature and ready to make appropriate decisions when they engage in enough exploration and have appropriate knowledge about occupations as well as themselves. Many studies on career maturity in adolescence have explored how young people carry out career preparation activities based on rational decisions about their career paths.

Career decision self-efficacy is one of the concepts frequently dealt with in previous studies in career development. Career decision self-efficacy was originally defined by Taylor and Betz (1983) as an individual's beliefs that he or she can successfully complete tasks involved in making significant career decisions. Career decision self-efficacy can lead to avoidance of or motivation toward career behaviors (Betz, 2000). For example, Hackett and Byars (1996) reported that a strong sense of career decision self-efficacy was associated with successful outcomes in the labor market while overcoming obstacles such as racism and sexism.

As individuals age, their degrees of career maturity and self-efficacy consistently improve. For example, high school students with high career maturity were less to experience delays in career development and difficulties in decision-making in career after entering college (Seo et al., 2015). Therefore, career development in adolescence can be an important factor affecting career paths in adulthood.

However, career education in secondary school is mostly focused on college preparation. Therefore, career maturity levels in secondary school may not be directly related to occupational preparation and occupational development. In fact, many young people are more confused about their career paths after entering college than in high school (Seo et al., 2015). Therefore, it is necessary to understand how career development changes over time and these changes affect later labor market outcomes.

## **2.2 | Career Development and Labor Market Outcomes**

The school-to-work transition (STW) is a critically important juncture in the life course (Schoon & Silbereisen, 2009). Socioeconomic attainment is a long-term process starting in adolescence, encompassing school-related orientations and

achievements, the acquisition of educational degrees and other qualifications, and movement through the early occupational career (Warren et al., 2002).

In the developmental perspective (Super, 1990), college students are in the exploration stage in the career development process. They are expected to accomplish developmental tasks such as choosing appropriate future jobs and taking actions to achieve them (Kang & Kang, 2017). Previous studies suggested that career development of college students is positively related to job stability, income and job satisfaction (Park & Lee, 2021). For example, Lee et al. (2016) analyzed changes in career development and categorized young people into five groups: career maturation group, career confusion group, career strengthening group, career weakening group, and career undecided group. When comparing the labor market outcomes of each group, they concluded that young people with high levels of career development over time tend to report better labor market outcomes compared to other groups (Lee et al., 2016).

### 2.3 | Gender and Labor Market Outcomes

Previous studies have not provided consistent findings on differences in career development by gender. Hackett and Betz (1981) proposed that gender was a significant variable influencing career development such as career decision and career adjustment. For example, male college students showed an even level of occupational self-efficacy in both traditional and non-traditional occupations, but female students had a much higher level of occupational self-efficacy than male students only in occupations traditionally dominated by women (Hackett & Betz, 1981). In contrast, Bores-Rangel et al. (1990) reported that there were not significant differences in career decision self-efficacy by gender. These inconsistent findings could be attributed to the social structure in which the study participants belonged (Bores-Rangel et al., 1990). In other words, women in a male-dominated society tend to have lower career self-efficacy than those in a gender-equal society.

Although labor force participation rates are up and turnover rates are down, women's employment histories remain more complex and diverse than men's (Hseuh & Tienda 1996; Moen & Smith 1986). Previous studies have found that women's labor force participation is greatly affected by life events unique to women,

such as childbirth and child rearing, and take various forms of career paths depending on the life course of an individual woman (Alon et al., 2001).

Traditionally, women have retained primary responsibility for the domestic arena. Despite women's rising commitment to the work force, it remains socially acceptable for women to choose endeavors other than work as their primary activity. Whether the context and conditions of female employment result from free or constrained choices, women's average attachment to the labor market, usually based on amount of time spent at work, remains weaker than men's (Alon et al., 2001). In these circumstances, organizations employing the corporatic career model, which demands the separation of careers and life and complete availability for work, will continue to be disadvantageous to women who are engaged in both career and family responsibilities (O'Neil et al., 2008).

## **3 | RESEARCH METHODS**

### **3.1 | Data and Sample**

This study analyzed data from the Youth Panel Survey (YP) collected by the Korea Employment Information Service. YP2007 started in 2007 with a sample of 15 - 29-year-olds, and follow-up surveys have been conducted annually. YP2007 aimed to study the current youth labor market and school life. This study utilized data collected in 2008, 2010, and 2020 from 778 respondents born between 1990 and 1992, high school students in 2008, and college students in 2010. They reached the ages of 28 - 30 years in 2020. The survey aimed to assess how career development in late adolescence affects labor market outcomes in their late 20s and whether these associations differ by gender.

### **3.2 | Measurement**

#### **3.2.1. Levels of career development**

Career development levels were measured using the Career Development Test

for Adolescence, developed by the Korea Employment Information Service in 2005, which consists of two components: career maturity and career indecision.

- Career maturity

The level of career maturity was measured using a 10-item self-reported scale. Five items assessed whether the respondents had concrete plans for their careers. The other five items assessed the extent to which the respondents were independent in exploring their careers. Survey respondents indicated how much they agreed with each item on a six-point Likert scale ranging from 1=*strongly disagree* to 6=*strongly agree*. Cronbach's alpha was 0.75 for the scale of career maturity.

- Career indecision

A career indecision scale was used to assess the level of career decision self-efficacy, such that the higher the score, the lower the career decision self-efficacy. The level of career indecision was measured using an 11-item self-reported scale. Six items assessed the lack of career motivation by asking if respondents had seriously thought about their future jobs. The other five items were about career conflict, asking if respondents were worried because their ability might not be sufficient to achieve the jobs they wanted. Career indecision is scored on a six-point Likert scale, ranging from 1=*strongly disagree* to 6=*strongly agree*. Cronbach's alpha was 0.86.

### 3.2.2. Employment outcomes

- Employment status

The respondents were divided into two groups based on their employment status. If they had paid jobs in 2020, they were coded as 1; if not, they were coded as 0.

- Monthly wage

Wages were investigated using annual, monthly, weekly, daily, and hourly wages, according to the wage unit in the Youth Panel Survey. In this study, wages were converted into monthly average wages for analysis.

### 3.2.3. Other variables

Gender was included in the analysis models as a potentially significant factor influencing the associations between key variables. Additionally, age, educational attainment, marital status, and parenthood were included in the models. Educational attainment was classified into four categories: (1) high school graduate, (2) 2-year college, (3) 4-year college, and (4) graduate school.

## 3.3 | Data Analysis

A paired-samples *t*-test was conducted to assess how career development levels changed after entering college. In addition, binary logistic regression and ordinary least squares regression analyses were conducted to assess the associations between career development in late adolescence and labor market outcomes in the late 20s. Logistic regression analyses were conducted to estimate the probability of an event occurring, such as employed versus unemployed, and ordinary least squares regression analyses were conducted to estimate wages of young people in their late 20s. Furthermore, all analyses were conducted separately by gender to investigate whether the associations between career development and employment outcomes differed by gender. Age, educational attainment, marital status, and parenthood were included in the analysis models as control variables. The research models were shown to satisfy the assumptions of ordinary least squares regression analyses, such as linear relationships, multivariate normality, no multicollinearity, and homoscedasticity. IBM SPSS 25 was used to perform the analyses.

## 4 | RESULTS

### 4.1 | Results of Descriptive Statistics

TABLE 1 shows respondents' characteristics. Approximately 60% of respondents were female. The respondents were aged between 28 and 30 years. More than half of the respondents were 29 years old in 2020, when the 14<sup>th</sup> wave of data



was collected. 18.6% of respondents were married in 2020, and 7.8% had children. Regarding educational attainment, more than half of the respondents graduated from 4-year college.

**TABLE 1.** Demographic Characteristics of Respondents ( $N=778$ )

Variables		Frequency	(%)
Gender	Female	466	(59.9)
	Male	312	(40.1)
Age	28	71	(9.1)
	29	447	(57.5)
	30	260	(33.4)
Marital status	Married	145	(18.6)
	Not married	629	(80.8)
	No info.	4	(0.4)
Children	Yes	61	(7.8)
	No	717	(92.2)
Educational attainment	High school	58	(7.5)
	2-year college	187	(24.0)
	4-year college	501	(64.4)
	Graduate school	32	(4.1)

TABLE 2 below shows the results of descriptive statistics for key variables, including career development during school days and later employment outcomes in the respondents' late 20's.

The levels of career development were measured by two components: career maturity and career indecision. The mean value of career maturity in high school was 4.07 points, which increased to 4.19 points two year later when they were in college. The mean value of career indecision was 2.71 points when respondents were in high school and decreased to 2.65 points in college.

About 79% respondents were employed in 2020 when they were aged 28 - 30, and 52% of them reported that their monthly income was between ₩2,000,000 and ₩3,000,000. Most of them (90%) had a monthly income between ₩1,000,000 and ₩4,000,000.

**TABLE 2.** Results of Descriptive Statistics for Key Variables

Variables		2 <sup>nd</sup> Wave (in 2008)	4 <sup>th</sup> Wave (in 2010)
Career maturity	Mean	4.07	4.19
	Median	4.00	4.20
	Min	2.00	2.70
	Max	5.90	5.90
	SD	0.58	0.54
	Q1	3.70	3.80
	Q3	4.40	4.60
Career indecision	Mean	2.71	2.65
	Median	2.64	2.55
	Min	1.00	1.00
	Max	5.45	6.00
	SD	0.66	0.68
	Q1	2.27	2.18
	Q3	3.09	3.09
Variables		Frequency	(%)
Employment status (in 2020)	Employed	613	(78.8)
	Unemployed	143	(18.4)
	Student	22	(2.8)
Monthly income (in 2020) (N=612)	less than ₩1,000,000	9	(1.5)
	₩1,000,000 - ₩2,000,000	132	(21.6)
	₩2,000,000 - ₩3,000,000	317	(51.8)
	₩3,000,000 - ₩4,000,000	103	(16.8)
	more than ₩4,000,000	51	(8.3)

## 4.2 | Changes in the Level of Career Development in Late Adolescence

A paired-samples *t*-test was conducted to assess whether the level of career maturity and indecision changed between 2008 and 2010. The findings suggested that students' career maturity levels improved after they went to college ( $t=4.53$ ,  $p<0.001$ ), while respondents tended to report lower levels of career indecision after going to college ( $t=-2.44$ ,  $p<0.05$ ). This suggests that young people continuously develop their career identities in late adolescence.

In addition, changes in career development levels after entering college differed by gender. While career development levels were higher for female students than for male students in high school, male students reported more positive changes after going to college than female students. Therefore, there were no significant differences in career maturity or career indecision between the male and female students in college ( $t=-0.622$ ,  $p=0.53$ ;  $t=0.95$ ,  $p=0.35$ ).

**TABLE 3.** Changes in the Level of Career Development during High School and College

			In 2010 (A)	In 2008 (B)	Diff. (A-B)	t (df)
Levels of Career Maturity	All (N=777)	Mean	4.19	4.08	0.11	4.53(776)***
		SD	0.54	0.58	0.68	
		SE	0.02	0.02	0.02	
	Men (N=312)	Mean	4.17	4.02	0.15	3.59(311)***
		SD	0.58	0.60	0.73	
		SE	0.03	0.03	0.04	
	Women (N=465)	Mean	4.20	4.11	0.08	2.84(464)**
		SD	0.52	0.57	0.63	
		SE	0.02	0.03	0.03	
Levels of Career Indecision	All (N=777)	Mean	2.65	2.72	-0.07	-2.44(776)*
		SD	0.68	0.65	0.79	
		SE	0.02	0.02	0.03	
	Men (N=312)	Mean	2.68	2.77	-0.10	-2.04(311)*
		SD	0.68	0.69	0.84	
		SE	0.04	0.04	0.05	
	Women (N=465)	Mean	2.63	2.68	-0.05	-1.44(464)
		SD	0.68	0.63	0.75	
		SE	0.03	0.03	0.03	

†  $p<0.1$ ; \* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p<0.001$

### 4.3 | Effects of Career Development on Employment Status

Binary logistic regression analyses were conducted to predict whether young people had paid jobs at the age of 28 - 30 years. Career development variables were included as predictors in the analysis models. In addition, gender, marital

status, and presence of children in households were added to the models. As TABLE 4 shows, the presence of a child in the family and the level of career indecision in college were significant predictors of employment at the ages of 28 to 30. For example, having a child led to a 79% decrease in the odds of having a job at the ages of 28 to 30 compared to those who did not have a child, while a one-point increase in career indecision levels in college led to a 34% decrease in the odds of having a job between 28 and 30 years.

**TABLE 4.** The Effect of Career Development on Employment Status

Variables		Model 1-All				
		B	SE	Wald	p	Exp(B)
(Constant)		-5.12	4.98	1.06	0.30	0.01
Gender (0=male)		-0.21	0.21	0.99	0.32	0.81
Age		0.25	0.17	2.22	0.14	1.28
Marital status (0=not married)		-0.32	0.29	1.23	0.27	0.73
Having children		-1.54	0.36	18.33***	0.00	0.21
Educational attainment (0=High school)	2-year college	-0.25	0.43	0.33	0.57	0.78
	4-year college	-0.07	0.40	0.03	0.87	0.94
	graduate school	-0.25	0.62	0.17	0.68	0.78
Career maturity	in high school	0.23	0.19	1.51	0.22	1.26
	in college	-0.27	0.21	1.60	0.21	0.77
Career indecision	in high school	0.40	0.17	5.45	0.20	1.49
	in college	-0.41	0.17	6.18**	0.01	0.66
$\chi^2(df)$		49.24(11)***				
-2LL		676.14				
Cox & Snell R <sup>2</sup>		0.06				
Nagelkerke R <sup>2</sup>		0.10				

†  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Previous research has suggested that marital status and parenthood are significant factors that affect women's career trajectories (Bass, 2014; Kil et al., 2018). Therefore, logistic regression analyses predicting employment status were conducted separately by gender. As seen in TABLE 5, marital status and having

a child were significant predictors of women's employment status but not for men's. Women who were married or had children were less likely to have a job in their late 20s. In particular, having a child led to 85% decrease in the probability of a woman having a job.

For men's employment status, the level of career indecision during school days was a significant predictor of having a job. While career indecision levels in high school were positively related to the probability of having a job, career indecision levels in college were negatively related to the probability of having a job in one's late 20s, showing that career indecision and confusion in adolescence may be a natural developmental stage in human life and thereby may not be directly related to employment status in adulthood. However, if young people have difficulties in making career decisions while in college, they may face challenges in preparing for a job.

**TABLE 5.** The Effect of Career Development on Employment Status by Gender

Variables	Model 1—Men				Model 1—Women				
	B	SE	Wald	Exp(B)	B	SE	Wald	Exp(B)	
(Constant)	-1.77	8.32	0.05	0.17	-7.74	6.53	1.41	0.01	
Age	0.13	0.28	0.23	1.14	0.32	0.22	2.17	1.38	
Marital status (0=not married)	19.65	10583.53	0.00	340622157.9	-0.75	0.31	5.97*	0.47	
Having a child	-0.37	15240.61	0.00	0.69	-1.90	0.40	22.71***	0.15	
Educational attainment (0=High school)	2-year college	-0.28	0.61	0.20	0.76	-0.19	0.67	0.09	0.82
	4-year college	-0.22	0.55	0.16	0.81	0.02	0.64	0.00	1.02
	graduate school	0.15	1.18	0.02	1.16	-0.60	0.85	0.50	0.55
Career maturity	in high school	0.17	0.28	0.37	1.18	0.17	0.25	0.44	1.18
	in college	-0.34	0.33	1.05	0.71	-0.07	0.29	0.05	0.94
Career indecision	in high school	0.67	0.28	5.94*	1.96	0.18	0.23	0.63	1.20
	in college	-0.53	0.27	3.92*	0.59	-0.24	0.22	1.17	0.79
N	299				452				
$\chi^2(df)$	19.05(10)*				60.48(10)***				
-2LL	241.07				401.69				
Cox & Snell R <sup>2</sup>	0.06				0.13				
Nagelkerke R <sup>2</sup>	0.11				0.20				

†  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

### 4.4 | Effects of Career Development on Wages

Ordinary least-squares regression analyses were conducted to predict the monthly wages of the young people. In addition to the variables of career development while in high school and college, gender, age, marital status, parenthood, and educational attainment were included in the models. While career development levels were not significant predictors of the wages of people in their 20s, gender, marital status, and educational attainment were statistically significant ( $p < 0.05$ ). For example, the wages of women were about ₩440,000 lower than those of men on average (see TABLE 6). In addition, young people who were married reported higher wages than those who were unmarried. Educational attainment is also a significant predictor of wages. Young people with bachelor’s degrees or above earned higher wages than high school graduates in their late 20s.

**TABLE 6.** The Effects of Career Development on Wages

Variables		Model 2 – All			
		B	SE	t	p
(Constant)		-129.137	189.44	-0.68	0.50
Gender (0=male)		-43.53	7.70	-5.66***	0.00
Age		10.43	6.25	1.67 <sup>†</sup>	0.10
Marital status		25.44	11.53	2.21*	0.03
Having a child		-4.39	19.36	-0.23	0.82
Educational attainment (0=High school)	2-year college	21.77	15.94	0.10	1.37
	4-year college	45.79	14.84	3.09**	0.002
	graduate school	85.53	23.93	3.57***	0.00
Career maturity	in high school	6.95	6.96	0.999	0.318
	in college	13.79	7.72	1.79	0.074
Career indecision	in high school	-1.764	6.448	-0.27	0.79
	in college	-0.50	6.645	-0.08	0.937
N		609			
F (df)		6.31(11,597)***			
R <sup>2</sup>		0.10			
adjusted R <sup>2</sup>		0.09			

<sup>†</sup>  $p < 0.1$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

To assess gender differences in the association between career development and wages, regression analyses were conducted separately by gender (TABLE 7). Marital status and career maturity in college were positively related to women's wages. Female workers who were married reported higher wages than those who were unmarried. Female workers who reported higher levels of career maturity while in college tended to earn higher wages in their late 20s. In contrast to previous findings (see TABLE 6), educational attainment was not a significant predictor of women's wages. For male workers, educational attainment was the only significant predictor of wages. These findings suggest that factors influencing career trajectories in adulthood may differ by gender.

TABLE 7. The Effect of Career Development on Wage by Gender

Variables		Model 2—Men			Model2—Women		
		B	SE	t	B	SE	t
(Constant)		83.81	313.50	0.27	-303.14	239.49	-1.27
Age		4.77	10.47	0.46	13.56	7.76	1.75+
Marital status		18.97	27.03	0.70	28.44	12.47	2.31*
Having children		-16.17	37.75	-0.43	7.35	23.53	0.31
Educational attainment (0=High school)	2-year college	19.94	22.21	0.90	15.21	25.56	0.60
	4-year college	60.08	19.76	3.04**	29.73	24.53	1.21
	graduate school	122.10	34.69	3.52***	44.30	35.44	1.25
Career maturity	in high school	6.82	10.97	0.62	7.04	9.12	0.77
	in college	1.20	12.15	0.10	24.33	10.14	2.40*
Career indecision	in high school	-2.98	10.03	-0.30	0.07	8.52	0.01
	in college	-0.78	10.59	-0.07	0.17	7.89	0.02
N		252			357		
F (df)		2.46(10,241)**			2.93(10,346)**		
R <sup>2</sup>		0.09			0.08		
adjusted R <sup>2</sup>		0.06			0.05		

†  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

## 5 | CONCLUSION

The present study examined career development continuity by assessing changes in career maturity and indecision in late adolescence and how career development in late adolescence affects later labor market outcomes. In particular, the study focused on gender as a significant factor influencing the association between career development and labor market outcomes.

Recently, many young people have faced challenges in the transition from school to work. Unemployment and underemployment in young adulthood may diminish job-related confidence, lower expectations, and lessen future prospects. Difficulties in becoming established in the labor market can result in the loss of opportunities for on-the-job training and other work socialization that enhances human capital, employment stability, and occupational attainment (Corcoran & Matsudaira, 2005; Hamilton, 1990; Vuolo, 2014). Public concern about young people's employment issues has spurred high interest and government investment in career development in childhood and adolescence. However, it is still uncertain whether career maturation has a positive effect on young people's entry into the labor market and their subsequent job experience. Therefore, the present study investigated whether career maturity and career decision self-efficacy in adolescence lead to positive labor market performance in the long term.

The main findings of this study are as follows. First, career maturity and career decision self-efficacy levels improved as students grew older. This finding supports the life-span developmental perspective that career development is a progressive dynamic process of maturation and adaptation (Jepsen & Dickson, 2003).

Second, the level of career development in college is a significant factor affecting labor market outcomes. In particular, high levels of career decision self-efficacy tended to increase the probability of respondents' having a job in their late 20s. In contrast, parenthood seems to have a negative impact on having a job in one's late 20s.

Third, career development levels were not significantly related to the wages of young people in their late 20s. Conversely, educational attainment and gender were factors related to wages, such that the higher the educational level, the higher the wage level. In addition, wages were lower for women than for men in their



late 20s, which is consistent with the findings of previous research. According to the OECD Economic Surveys (2016), Korea's gender wage gap increases with age and is the largest in the OECD. The gender gap in wages appeared in the late 20s when most men in South Korea were expected to enter the labor market. Although the gender gap in the labor market has gradually decreased over time, it is still present.

Fourth, the findings showed gender differences in the factors affecting labor market outcomes. While career indecision in college was significantly correlated with men's employment status, marriage and parenthood were the most significant factors predicting the employment status of women in their late 20s. Previous studies have shown that women's labor market position is strongly related to their transition to parenthood (Gutierrez-Domenech, 2005; Jeon, 2008; Kil et al., 2018; Shapiro & Mott, 1994). Unlike men, women are likely to experience systematic career disadvantages (Koelet et al., 2015), frequently leading them to decide to work part-time or stay at home full-time after the birth of a child (Gutierrez-Domenech, 2005; Shapiro & Mott, 1994).

However, the study presents contradictory findings regarding wages for female workers. While career development during the transition from school to work did not predict whether women had paid jobs in their late 20s, career maturity can be a significant factor affecting the wages of women who had decided to keep their jobs in their late 20s.

This study's results have several implications. First, it seems necessary to accept undecided career paths and confusion as a natural developmental process of adolescence and to provide opportunities for them to make various career explorations. It may not be helpful to urge adolescents to make hasty career decisions. Contrariwise, career maturity and decisions after entering college can affect not only job availability but also job quality. Therefore, active intervention in career development should be extended to the 20s and beyond, a period that should be considered emerging adulthood.

Second, educational attainment is a decisive factor for wages. Those who graduated from a four-year college or higher received higher wages than those who graduated high school. However, the well-known relationship between educational background and wages (Rupert et al., 1996; Won, 2020) showed a

clear trend for male workers but not for female workers. In addition, marriage and parenthood were significant predictors of employment status for women but not for men in their late 20s. These results show that there are gender differences in career development trajectories. Overall, the career path for women seems to be more about work and family balance than that for men, and women's decision-making process regarding their labor market participation may require a different approach from that of general employment-related research. Further research should address the interactions between internal factors such as psychological and emotional aspects related to women's labor market participation and external factors such as corporate culture and career model to understand women's labor market experience in depth.

Third, the burden of care owing to marriage and childbirth tends to lead to career interruption. While some high-paying female workers can continue their jobs after marriage, other female workers are forced to work fewer hours, work part-time, or quit their jobs altogether. This may lead to women avoiding childbirth. Therefore, more active measures are needed to address this issue. The increase in female participation in education and the labor market has increased the opportunity costs of giving up paid work after childbearing, and the dual breadwinner model has become increasingly standard (Kil et al., 2018). In addition, the availability of formal childcare services and paid parental leave has reduced the opportunity costs associated with the combination of work and children (Rindfuss et al., 1996; van der Lippe & van Dijk, 2002). However, despite these current changes, parenthood seems to pose barriers for women to pursue achievement in the labor market. Thus, a shift in the social conception of women's work and institutional support for working mothers may be necessary.

Although this study provides meaningful findings useful for understanding the relationship between career development and labor market outcomes over time, it has several limitations. The labor market outcomes in this study only have information for those in their late 20s. Given the current situation in which many young people are delaying marriage and childbearing, information about labor market outcomes up to their 30s and beyond may clarify some contradictory findings about gender differences in the present study. In addition, career development is a dynamic process that interacts with the psycho-emotional and

social aspects of individuals. Studies combining quantitative and qualitative methods can be ideal for understanding gender differences in the career development process and its long-term effects.

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국문초록

## 진로 발달이 노동시장 성과에 미치는 영향: 성별 차이를 중심으로

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본 연구는 진로 성숙도와 진로 결정의 자기효능감이 진로 결정 이후의 노동시장 성과에 어떠한 영향을 미치는지 살펴보고자 하였다. 또한, 성별이 청소년 후기의 진로 발달과 20대 후반의 노동시장 성과 간의 관계에 어떤 영향을 미치는지 평가하였다. 본 연구는 한국고용정보원에서 수집한 ‘청년패널조사(YP)’ 데이터를 사용하였다. 2008년, 2010년, 2020년에 778명의 응답자로부터 수집한 정보를 활용하여 분석을 실시하였다. 연구 결과, 진로발달 수준은 고등학교와 대학 재학 기간 동안 지속적으로 향상되었으며, 대학 시절의 진로발달 수준이 노동시장 성과에 유의한 영향을 미치는 것으로 나타났다. 또한, 성별에 따라 진로발달과 노동시장 성과 간의 관계에 차이가 있는 것으로 나타났다. 이러한 결과는 성인 진입기에 진로발달을 위한 적극적인 개입이 필요함을 보여준다. 즉 노동시장 성과를 향상시키는 데 성인 진입기의 진로발달 프로그램 제공 등이 긍정적으로 기여할 수 있음을 시사한다. 한편 여성의 진로는 남성의 경우보다 알가정 양립 문제와 밀접한 관계를 갖는 것으로 나타났다.

**주제어:** 진로 발달, 노동시장 성과, 고용상태, 임금, 성별

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