# FACTORS AFFECTING STARTING WAGES OF MASTER'S DEGREE-GRADUATES IN TAIWAN

Tao-Ming Cheng<sup>1</sup>, Hsing-Yu Hou<sup>2</sup>, Dinesh Chandra Agrawal<sup>1</sup>,

# Long-Sheng Chen<sup>1</sup> and Ching-Jung Chi<sup>1</sup>

<sup>1</sup>Chaoyang University of Technology, Taichung, Taiwan, R.O.C. <sup>2</sup>National Taichung University of Science and Technology, Taichung, Taiwan, R.O.C.

# ABSTRACT

The reputation of a university is reflected in the graduate's employment rate, salary, and position of its graduates in the job market. To improve the efficiency of the allocation of resources, the Ministry of Education in Taiwan, in cooperation with the Ministry of Labour and Finance, had set up a job tracking mechanism for university graduates from the academic year of 2012 to 2016. The present study examined 416 records of postgraduates' employment wages in the case university in comparison with the average monthly salary among 157 universities. Correlation, ANOVA, and regression analysis were carried out. The results demonstrate that the academic system significantly influenced the wages, and the level of stable wages showed a positive relationship with job satisfaction and learning-job-congruence. Personal social networking was a significant predictor of the stable wage level. Besides, students with science, engineering, and technology background, and those working in the public sector earned higher wages than others.

Keywords: Employment wages, Post-graduate, Job satisfaction, Learning- job-congruence

# Introduction

Differences in the quality of a university's educational performance are likely to be reflected in the graduates' salaries, employment rates, and position of university graduates in the labor market. Past research has examined the quality of teaching, research, and service by teachers (Abbott and Doucouliagos 2003; Casu and Thanassouils 2006; Cherchye and Abeele 2005; Johnes 2006; Kao and Hung 2008). Research has also considered the importance of students' starting wages after they graduate and enter the job market (Ehrenberg 2002; Kong and Fu 2012; Lu and Fu 2015). The Ministry of Education (M.O.E.) in Taiwan keeps data on the link between employment flow and wage level in cooperation with the Ministry of Labour and the Ministry of Finance. The average salary one year after graduation can be evaluated for each university. The average salary of the same academic type (day or night) throughout Taiwan can also be compared with the data of each university. A positive difference shows the reputation of the university in comparison with the national average. Past research has demonstrated that a higher reputation of a university leads to higher initial wages for students graduating from the university (Kong and Jiang 2013).

Several factors may affect the employment wages of graduates after they complete university studies. These may include whether they work in the public or private sector. In a separate study, it was found that both the public and private sectors preferred male graduates from old and well-established universities (Berggren 2011). In addition, many researchers have discussed the positive relationship between job satisfaction and wages (Jung and Lee 2016; Kenny et al. 2016).

To improve the efficiency in the allocation of educational resources, the Ministry of Education (M.O.E.) in Taiwan, in cooperation with the Ministry of Labour and Finance, had set up a job tracking mechanism for university graduates from the academic year of 2012 to 2016. This data can be used to examine the employment flow, and salary level of graduates using big data, and the analysis can be used as a policy reference.

The analysis of starting salaries of students after graduation and career opportunities in different colleges, academic systems (day/night classes), and several years after graduation in the case university in Taiwan presents the institutional performance. Furthermore, the original data from the M.O.E. can be linked with the 'Graduate employment satisfaction questionnaire' survey carried out by the case university to generate additional insights.

The main purpose of this study is: (1) to analyze factors influencing the graduation wages in the case of the university; (2) to evaluate the correlation among 'Graduate employment satisfaction' 'Learning-job-congruence' and the difference in wages in comparison with the national average; (3) to predict the stable employment wages model. The research structure is shown in Figure 1. This research may be useful for universities and policymakers in improving students' career-related strategies.

Page 133 of 151



# Literature review





### **Employment conditions in Taiwan**



### **Employment of postgraduates and graduates**

In 2019, the Ministry of Labour in Taiwan surveyed students who graduated between the academic year of 2012 to 2016. The survey included data on graduates' full-time salaries, educational degrees, academic year, and day/night academic system. The survey results showed that the percentage of students with bachelor's degrees was the highest (79), followed by Masters (20), and Ph. D (1). Data on wages showed that the average wage for students with a bachelor's degree was the lowest (NT\$28,950), followed by Masters (NT\$ 47,173) and Ph. D (NT\$67,527). Page **134** of **151** 

Figure 2 compares the day/night academic system in which night classes represent part-time degree internationalization. It can be seen master's degree students who attended night classes received higher superior salaries compared to graduates in the day system. Students with bachelor's degrees are the main source of labor in industries in Taiwan. The number of graduates with Ph. D. degrees decreased gradually from 2012 to 2016. Different career clusters can also be discussed to explore the level of wages in Taiwan.

The number of graduates, employment rate, unemployment rate, and average monthly wages is the four main indicators to be discussed among master's degree internationalization to deal with employment problems of postgraduates in a given educational set-up (Xiao 2015). Because of the imbalance between talent supply and demand types, the weak demand for human resources with a master's degree decreased the average salary in the labor market. Despite a marginal drop in unemployment, the median starting salary for master's degree graduates has also declined (Morrissey 2013). In Korea, students' search for better education at university, and the prestige of the university continue to affect occupational wages (Jung and Lee 2016). In Japan, the average wage of postgraduates is approximately 30–40 percent higher than undergraduates (Morikawa 2015). Some researchers have reported that postgraduate students with sufficient competencies could attract higher employment opportunities (Ali and Jalal 2018; Potanin 2019). In our study, the wages of students' graduated from the case university were compared with the average wages of all universities in Taiwan to analyze an overall employment scenario and the existence of any relative advantages.

### Factors influencing employment wages

Nurpratiwi et al. (2020) stated that higher education had a positive and significant effect on the wages of workers. According to Carroll (2014), if a university has a high international ranking, it can have a positive effect on graduates' employment and wages. Therefore, more and more universities are paying attention to their institutional rankings (Kong and Jiang 2013). A higher ranking and good reputation can lead to higher student enrolment in an academic institution. Cooperation between industry and academia can also create a higher number of employment opportunities. Næss (2016) demonstrated competency in different job clusters by examining different levels of wages. It was noted that the increased number of graduates was absorbed by the knowledge-intensive economic activities such as "professional and technical services" and "information and communication" (Næss 2016). Therefore, common competencies were analyzed in this study to predict the stability of employment wages. Job satisfaction plays an important role in employment wages (Krumbiegel et al. 2018; Liu 2019). It can be related to labor market mobility (Freeman 1978), job performance (Mount et al. 2006), and personal wellbeing (Rode 2004). Job mismatch is an important cause of job dissatisfaction, job inefficiency, and wage losses (Bárcena-Martín et al. 2012; Boudarbat and Chernoff 2012; Vaisey 2006;

Page 135 of 151

Verma and Zhang 2019). Hence, in our study, the factors of learning-job-congruence, and job satisfaction were analyzed to determine its relationship with employee wages.

# Methodology

### Samples and procedure

The original employment data from the Ministry of Education (M.O.E.), Taiwan was in cooperation with the Ministry of Labour and Finance from 2012 to 2016. Alumni from all universities in Taiwan were considered in the study after eliminating those graduates who left for abroad, and also those who opted for further education or military service. Postgraduates' employment wages records of 416 students for the academic years of 2012-2016 in the case university and the average monthly salaries of graduate students' among 157 Taiwanese universities are available in the M.O.E. survey. Annual data is available for wage levels for a total of five, four, three, two, and one year(s) for 2012, 2013, 2014, 2015, and 2016 graduating classes, respectively. The data pertained to the master's degree graduates in both the day and night system in five colleges (Management, Science and Engineering, Design, Humanities, and Social Sciences, and Informatics). In the first stage, we carried out basic statistical analyses and ANOVA.

In addition, in this study, we have used data from the 'Graduate employment satisfaction questionnaire' collected by the case university. The participants who graduated in the academic year of 2014 and 2015 completed the survey. After working for one year, they answered the questions online in the academic year of 2015-2016. In the second stage, we linked the employment wages with the 'Graduate Employment Satisfaction Questionnaire.' There are a total of 46 records in our analyses. Then, we carried out basic statistical analyses, correlation, and regression analyses.

### **Measures and variables**

Students answered the survey using a five-point scale; the options were "strongly agree," "agree," "neutral," "disagree," and "strongly disagree." The scoring order was 5,4,3,2 and 1 point, respectively. The higher the score, the more satisfied the student was with the working situation and learning-job-congruence. Also, the case university collected data on common competencies, including professional and practical ability, information technology application capability, communication coordination and teamwork ability, and autonomous learning ability. We explored the correlation between graduates' employment satisfaction, learning-job-congruence, common competency, and the difference in employment wages during the academic year of 2015 and 2016. The difference in the average wages of graduates from the case university and wages of graduates from all-universities was called the "stable wage".

Page 136 of 151

Caroor cluster	Definition
<u>A griculture</u>	The production processing marketing distribution financing and development
food and natural	of agricultural commodities and resources including food fiber wood products natural
resources	resources, horticulture, and other plant and animal products/resources.
Architecture and	Careers in designing, planning, managing, building, and maintaining the built
construction	environment.
Arts, A/V	Designing, producing, exhibiting, performing, writing, and publishing
technology, and	multimedia content, including visual and performing arts and design, journalism, and
communications	entertainment services.
Business,	Business management and administration careers are encompassing planning,
management, and	organizing, directing, and evaluating business competencies essential to efficient and
administration	productive business operations. Business management and administration career
	opportunities are available in every sector of the economy.
Education and	Planning, managing, and providing education and training services and related
training	learning support services.
Finance	Planning, services for financial and investment planning, banking, insurance,
	and business financial management.
Government and	Executing governmental competencies to include Governance; National
public administration	security; foreign service; planning; revenue and taxation; regulation; and management
Health saismas	and administration at the local, state, and rederal levels.
<b>H</b> ealth science	Framming, managing, and providing therapeutic services, diagnostic services,
Hospitality and	Hospitality and tourism are ancompassing the management marketing and
tourism	operations of restaurants and other food services lodging attractions recreation events
tourism	and travel-related services
Human services	<b>P</b> reparing individuals for employment in career pathways that relate to families
	and human needs.
Information	Building linkages in I.T. occupations framework: for entry-level, technical, and
technology	professional careers related to the design, development, support, and management of
	hardware, software, multimedia, and systems integration services.
Law public	
Law, public	Planning, managing, and providing legal, public safety, protective services, and
safety, and security	homeland security, including professional and technical support services.
Manufacturing	Planning managing and processing of materials into intermediate or final
Manufacturing	products and related professional and technical support activities such as production
	planning and control maintenance, and manufacturing/process engineering
Marketing, sales.	<b>Planning</b> managing, and performing marketing activities to reach
and service	organizational objectives.
<b>a</b> .	
Science,	Planning, managing, and providing scientific research and professional and
technology, engineering,	technical services (e.g., physical science, social science, engineering) including
and mathematics	laboratory and testing services, and research and development services.
Transportation	Planning management and movement of people materials and goods by road
distribution and logistics	ninelines air rail and water and related professional and technical support services such
ansarroution, and rogistics	as transportation infrastructure planning and management logistics services mobile
	equipment, and facility maintenance.
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### **Table 1: Career industries**

When the stable wage was higher than zero, it means that graduates from the case university received higher wages than the graduates from other universities. The hypothesis is: The "stable

Page 137 of 151

wage" was positive among job satisfaction, learning-job-congruence, and common competency. To predict the stable employment wages model, we applied regression analysis. The independent variables were college, day/night academic system, academic years, graduation years, the number of paid graduates, the number of graduates working in the same company, employment rate, the scores of graduate employment satisfaction, learning-job-congruence, and common competency. The dependent variable was the difference between the case university and the average of all 157 Taiwanese universities students' employment wages. Because college and academic systems were categorical variables, they should be coded into dummy variables. College were coded as Management: (0,0,0); Science and Engineering: (0,1,0); Design: (1,0,0); Humanities and Social Sciences: (0,0,1); Informatics: (0,1,1). Academic systems were coded as night: 1, day: 0.

There are different types of job clusters in the labor market shown in Table 1 (States' Career Clusters Initiative, 2005). In our study, the outperforming wages for a college or department will be discussed concerning jobs in different industries.

# Results

### **Employment wage database**

### **Basic statistics**

Items		Ν
Academic year	2012	139
	2013	115
	2014	81
	2015	54
	2016	27
Academic system	Day	248
	Night	168
College	Humanities and Social	59
Sc	iences	
	Science and	118
Er	ngineering	
	Design	34
	Informatics	71
	Management	134
Number of years after graduation	1	132
	2	113
	3	85
	4	57
	5	29

#### Table 2: Frequency table of wages in 2012-2016

Page 138 of 151

The basic statistics of master's degree graduates for the case university, including academic year, day/night academic system, college, and several years after graduation are presented in Table 2. If the number of graduates was lower than 3 for any year, the data was deleted to secure personal information.

	Academic Year							
-	20	201	201	201	2016			
Number of years after graduation	12	3	4	5	2010			
1	49,	47,2	46,3	47,7	44,5			
	096	11	21	95	45			
2	48,	50,2	48,0	51,4				
	895	91	62	59				
3	52,	53,5	49,7					
	827	12	18					
4	53,	54,3						
	715	97						
5	55,							
	996							

Table 3: Average monthly wages received by graduates for the case university from 2012	to 2016
(Unit: NT\$*)	

\* NT\$=New Taiwan dollar (1 US\$ = 30NT\$)

Table 3 shows that the average monthly starting wages decreased gradually from 2012 to 2016. The results showed that the graduates' average monthly salary increased from the third year after graduation.

### ANOVA

ANOVA can determine whether there is a significant factor in explaining each facet of variance. The independent variables are an academic year, day/night academic system, college, and several years after graduation. There are three dependent variables in our analysis. First, the average monthly wage of master's degree graduates from the case university. Second, the average monthly wages of graduates from all the universities in Taiwan. Third, the difference in graduates' wages between the case university and graduates from 157 universities in Taiwan.

Before the ANOVA, the normality test was conducted by Kolmogorov-Smirnov's method because the number of postgraduates was over 50 (N=416). The number between Day and Night in the academic system was not significantly different in the analysis (p>.05). So the data was fitted the normal distribution. From Table 4, it can be seen that the day/night academic system variable was a significant factor. The average wage of the student in the night system was significantly higher than graduates of the day system. This finding holds for the case university and all universities in Taiwan. The difference between the wages of graduates from the case university and the national average (NT\$6,796) was lower for the night system than for the day

Page 139 of 151

system (NT\$14,527). The average monthly salary of the graduates of the night system is more than NT\$72,796 for the case university.

		Table	4: ANOVA of the	academi	ic systen	n and wage (Unit: 1	NT\$)	
Academic system		Case		All unive	rsities	Difference (I-J)		
		uni	university average		verage wa	nge (J)		
			wage (I)					
Day	Mean		35,140		4	19,667	-14,527	
	Ν		248			248	248	
	Standar	rd error	7,937			8,707	9,113	
Night	Mean		72,796		7	79,592	-6,796	
Ν			168			168	168	
Standard error		16,018			9,941	14,890		
			Sum of					
It	tems		squares	d.f. Mean sum of squares		Iean sum of squares	F	Sig.
Case aver	rage wage(I)	Between groups	142,015,057,800		1	142,015,057,800	1,006.614	.000
		Within groups	58,407,920,760	414		141,081,934		
		Total	200,422,978,500	415				
Total univ	versities	Between groups	89,685,980,050		1	89,685,980,050	1,053.919	.000
Average	wage(J)	Within groups		414		85,097,620		
		Total		415				
Difference	e(I-J)		5,986,531,082		1	5,986,531,082	43.075	.000
			57,537,891,580	414		138,980,414		
			63,524,422,660	415				

\* NT\$=New Taiwan dollar (1 US\$ = 30 NT\$)

# Employment satisfaction questionnaire database

We linked the data of the 'Graduate employment satisfaction questionnaire' and the M.O.E. data for the years 2015 and 2016. The analysis shows that the day/night academic system factor was significantly different (p value=.001) from other factors. The difference between the average monthly salary of graduates from the night system in the College of Science and Engineering between the case university and all 157 Taiwanese universities was positive, as shown in Table 5. This subject area has a strong focus in the case of university.

# Table 5: Frequency of graduate employment satisfaction questionnaire completion in 2015-2016

	Coding	Item	N
Acade	0	Day	25
mic system	1	Night	21
Colle	1	Humanities and Social Sciences	4
ge	2	Science and Engineering	15

Page 140 of 151

	3	Design		3		
	4		8			
	5	Management				
Dependen	t variable: Difference o	f wages				
Acade	College	Mean	SD	N		
mic System			< 0.00			
Day	Humanities	-3,222	6,090	2		
an	d Social Sciences					
	Science and	-20,761	7,340	8		
Er	ngineering					
	Design	-13,972	9,663	2		
	Informatics	-23,857	10,852	5		
	Management	-20,360	7,254	8		
	Total	-19,305	9,244	25		
Night	Humanities	-15,986	15,741	2		
an	d Social Sciences					
	Science and	545	15,047	7		
Er	ngineering					
	Design	-10,170		1		
	Informatics	-3,660	8,665	3		
	Management	-12.189	14,297	8		
	Total	-6,991	14,153	21		



Figure 3: Comparison of wages in 2015 and 2016

In Figure 3, the red text shows the difference in the graduates' average monthly salary between the case university and the average of all universities. The black text is the average monthly salary of all universities, and the blue text is the average monthly salary of the case university. The figure shows that the ranking of the colleges concerning monthly salary for the day system in all universities is: College of Informatics> College of Management> College of Science and Page 141 of 151

Engineering> College of Humanities and Social Sciences > College of Design. For the night system, the ranking in terms of average monthly salary for all universities is College of Management> College of Informatics> College of Science and Engineering> College of Design >College of Humanities and Social Sciences. The graduates in the night system had the highest average salary for both the case university and average of all universities. The Informatics College graduates from the day system exhibited the highest starting salaries for all universities sample, but the College of Humanities and Social Sciences had the highest starting salaries in the day system at the case university. The starting average salary was only higher than the all-university average for the graduates of the College of Science and Engineering in the night system of the case university (Difference = 545).

	Table 6: Pearson correlation										
	1	2	3	4	5	6	7	8	9	10	<sup>11</sup> 2
<ol> <li>Number of paid graduates</li> <li>Case</li> </ol>	1										
university graduate avera monthly salary	478 <sup>**</sup>	1									
<ol> <li>Employmen rate</li> <li>Number of</li> </ol>	206	.5 28 <sup>**</sup>	1								
graduates working in the same company	290	.8 19 <sup>**</sup>	517**	1							
5. All universities monthly salary	472 <sup>**</sup>	.8 30 <sup>**</sup>	434 <sup>**</sup>	742**	1						
6. Stable wage	241	.7 03 <sup>**</sup>	377**	497**	187	1					
7. Employmen satisfaction	- .087	.2 98*	150	269	041	.4 74 <sup>**</sup>	1				
8. Learning-jol congruence	.070	.3 08*	198	353 <sup>*</sup>	109	.4 03 <sup>**</sup>	.57 9**	1			
9. Professional and practical ability	.172	.0 14	.017	075	.126	.1 86	.052	.0 95	1		
10. Information technology	_	0	_		_	.1	00	0			
application capability 11.	.246	43	.002	084	.090	91	4	17	918**	1	
Communicatio	-	.0	-		-	.2	.13	.0		.8	
team work	.094	65	.073	015	.072	07	3	09	854**	14**	1
ability 12 Autonomou		0			_	1	09	0		8	9
learning ability	.192	33	004	070	.106	.1	0	26	874**	38**	15**

Correlation

Note: \*\* p-value is significantly smaller than .01

\* p-value is significantly smaller than .05

We explored the correlation between Graduate employment satisfaction, learning-jobcongruence, common competency, and the difference in employment wages during the academic year of 2015 and 2016 (Table 6). We referred to the difference in the wages of graduates from

Page 142 of 151

the case university and all-universities as the stable wage. The findings were as follows: (1) The stable wage was significantly and positively related to employment rate, case university graduate monthly salary, and the percentage of students working in the same company; (2) The stable wage showed a significant and positive relationship among job satisfaction, learning-job-congruence; (3) The monthly salary of postgraduates in the case university has a significant and positive relationship with the starting average salary of students from all-universities; (4) The common competency variable has no significant relation with the stable wage, however, the measures of the variable were positively related to each other.

## **Regression Analysis**

To explore students' stable wages, regression analysis was used to predict important factors and create an influential model. The independent variables were college, day/night academic system, academic years, number of years after graduation, the number of paid graduates, the percentage of graduates working in the same company, employment rate, the scores of Graduate employment satisfaction, learning-job-congruence, and common competency. The dependent variable was the difference between the graduates' starting salary for graduates of the case university and the average of all universities graduates. The R square of the step-wise regression was .370(adjusted R square=.340). The results (Table 7) matched the correlation analysis.

	-	Uns coeffic	tandardized ients	Stan dardized coefficients		ig.	Co y statist	2	urbin- Watson test	
		_	Std.	_			Т			
	Model	В	Error	Beta			olerance	.I.F.		
S	t Co	-	13,0							
able wage	nstant	62,614.719	49.416		4.798	.000			.370	.588
	W	16,	5,08	0.39			0			
	orking in the	129.000	5.952	8	.171	.003	.928	.078		
	same									
	company									
	Е	13,	4,58	0.36			0			
	mployment	383.158	5.625	6	.919	.006	.928	.078		
	satisfaction									

### Table 7: Coefficients in the stepwise regression model

The regression equation was:

Y=-62,614+16,129\* Working in the same company +13,383\* Employment satisfaction (1)

Table 7 shows that the number of graduates working in the same company and job satisfaction are significant variables for explaining the stable wage (p-value <0.05). The standardized coefficients of the rate of working in the same company and job satisfaction are positively

Page 143 of 151

related to the stable wage. It means that as the number of graduates working in the same company and job satisfaction increase, graduates' wages become more stable.

### Discussion

### College and academic system

According to the statistics of 2015 and 2016 by the Ministry of Labour, Taiwan, the average wage of master's degree graduates was NT\$47,056 (Day: NT\$41,960; Night: \$NT60,517). Also, the night system graduates in the College of Informatics, College of Management, and College of Science and Engineering earned higher wages than the overall average of night system graduates in other disciplines. In two separate reports, it was found that enrolment for master's degree courses in Science and Technology at Japanese National Universities was higher than the enrolments in humanities and social sciences (Hirasawa 1997; NISTEP 2011). The industries with tech-oriented economies that need highly skilled workers are paid higher wages (Crawford 2017). Also, some industrial sectors preferred master's degrees or doctoral level graduates from a specific college (Nakayama 2014). In our study at the case university, the night system graduates in the College of Science and Engineering received higher starting wages compared to graduates from other universities. The starting salary of day system graduates, however, was significantly lower than the starting monthly salary of night system graduates. These findings conform to a study on part-time postgraduate students in Tasmanian health and human services (Shannon et al. 2017), where students not only received higher wages but also showed improved job performance, self-esteem, and increased motivation to learn (Shannon et al. 2017). The reason for this is that students attending night classes in the university mostly are engaged in jobs in day time thus, they already have job experience of a few years, hence higher packages compared to fresh graduates of the day academic system. It is similar to an earlier report, where it was found that graduates could reduce wage inequality by attending night classes to upgrade their skills (Chuang & Lai 2017).

### Job satisfaction

The stable wage showed a significant and positive relationship with job satisfaction, learning-job congruence. It conforms with the previous research findings (Bartolucci et al. 2017; Mateos-Romero & Salinas-Jiménez 2018; Mohanty 2018). It has also been found that wage and job satisfaction as a consequence of skill mismatch is negatively related, whereas education mismatch shows much weaker effects on workers' job satisfaction (Badillo-Amador and Vila 2013; Hur et al. 2019). In our study, the correlation analysis showed that a stable wage has a significant and positive relationship with job satisfaction, learning-job-congruence. Professional skill in the working area influences job satisfaction and wages more than education training.

### Social networking

Bian and Huang (2015), and Yogo (2011) found that social networks contribute to explaining Page 144 of 151

wage differential according to institutional sectors, such that job seekers with strong networks exhibit a wage premium over an average wage. In another study, social networking was found to be useful in a job search and influenced income distribution (Zhang et al. 2018). From the results of our study, it is clear that a stable wage has a significant and positive relationship with several graduates working in the same company. Besides, social networking was a significant factor in predicting the stable wage in the stepwise regression analysis. From the Graduate employment satisfaction questionnaire survey, it was found that professional training and networking with classmates were two important factors in different industries. It showed that social networking could result in an enhanced average salary and an earlier job search compared to other channels.

### **Public institution**

The average wage of night system graduates from the Department of Applied Chemistry (College of Science and Engineering), and the day system graduates from the Department of Social Work (College of Humanities and Social Sciences) in the case university were higher compared to other disciplines. Graduates from these departments get employment in industries supported by the Taiwan government, public opinion agencies, and enterprises dealing with national defense affairs. Reports from several other countries also show that employees in the public sector received higher wages compared to the private sector. It may partially be due to better labor market characteristics of the public sector employees compared to the private sector (Berson 2016; Biesenbeek and Werff 2019; Hospido and Moral-Benito 2016; Marko 2017). The results in the present study showed that different career clusters influenced stable wages.

### **Implications and Recommendations**

Since the competition in the job market is increasing each passing day, this question is growing in importance around the world that what universities should do to enhance the employability of their students. Besides many other aspects, designing the curriculums for postgraduates is an important consideration the university should take into account.

Curriculums need to be commensurate with requirements by the public and private sectors. The university should facilitate career training for students to develop required competencies before they graduate and leave the campus. Through the industry-academy cooperation, and intern or curriculum committee, universities can invite the industry people, and alumni in job to share their work experience.

Regarding the day-night academic system factor, students attending night classes in the university mostly already have job experience of a few years, hence the curriculum design for the experienced students should be different from the day academic system training.

Also, concerning the variable of college, it reflects that advanced concepts, skills, and technology get higher returns in terms of salaries of managers, information staff, and engineers. The curriculum design in the College of Design and College of Humanities and Social Sciences

Page 145 of 151

can be combined with artificial intelligence (A.I.) or Business Intelligence (B.I.); thus, the application in the working areas can be improved, and value-added. From the findings, the Graduate Education program has a positive correlation between college/program and starting wages.

About the variables of job satisfaction to improve the learning-job-congruence, the case university can plan and arrange career clusters' interest survey. Through Holland Codes, students automatically can understand their degree of interest in the department before graduation. Thus, they can learn and enjoy matching careers. Also, it will decrease the rate of drop-out and lead to increased job satisfaction.

At the university level, social network forums can be created for teachers, students, and alumni to enhance the ease of the search for the first job. Also, alumni's experience sharing seminars can be arranged on the campus, so that current students can learn and get feedback from them. Internship opportunities, project oral presentation, visit industries by students, and their participation in industrial or business competitions will enhance the understanding of work culture and provide platforms for social networking. University graduates looking for employment need to be flexible, work on demand, and bring skills to the workplace as required by the employers. Also, there should be facilities for teachers to upgrade their skills as per market trends so that students get exposed to the latest information.

# Conclusion

Universities take pride and attract new enrolment based on the high wages of their graduates in the job market. Therefore, it is important to analyze factors affecting students' wages for deeper insights in formulating strategies and viable plans. The present study demonstrates that the college and day/night academic system influenced master's degree graduates' wages in the case of university. The stable wages showed a significant and positive relationship with employee satisfaction and learning-job-congruence. In addition, personal social networking was significantly positive in predicting a stable wage. Our study also supports the findings of other researchers that students with science, engineering, and technology background and those employed in the public sector received relatively higher wages compared to graduates engaged in jobs related to humanities and social sciences. Universities whose focus is on traditional career paths should be taking note. How can universities support their students for the new world of work? What can they do to ensure that students are entrepreneurial, successful, and feel fulfilled?

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Page 147 of 151

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Page 148 of 151

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Page 149 of 151

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