



## Article

# Analyzing Determining Factors of Young Graduates' Decision to Stay in Lagged Regions

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**Abstract:** This study identifies what factors have effects on college graduates' decisions to stay for jobs in lagged regions using a bivariate probit model with sample selection. The results show that strong preferences for a home village and a university region contribute to the decision about job location concerning the regions. In addition, low living costs have much significant impact on spatial choice compared with economic factors, such as the levels of wage and job security. The long-term economic growth of lagged regions could be affected by a preference of high-school graduates to attend local universities.

**Keywords:** young college graduates; location decision; hometown effect; university region

## 1. Introduction

In 2019, The New York Times reported that, from 2000 to 2010, knowledgeable workers moved to rural regions in Minnesota, US with ample socioeconomic assets due to the government loan forgiveness program and financial incentives across generations. Many lagged regions attempted to induce well-educated people to return from economically developed regions in order to strengthen regional competitiveness [1,2]. It would be worthwhile finding out what makes young educated people work in lagged regions because workers so rarely return home to lagged regions [3,4]. Several studies have shown that people tend to stay in lagged regions where they have lived due to familiarity with their hometown or their university [5–7]. However, there are few studies to examine why young graduates stay in lagged regions without leaving for the high expected wages of large cities.

The purpose of this study is to analyze the determining factors of young college graduates' decision to stay for a job after graduation in lagged regions. By using a bivariate probit model with sample selection, this study explores the spatial mobility of Korea's young graduates born in lagged regions in terms of individual background and regional components. One innovative element that distinguishes this paper from previous works is that it empirically identifies non-economic factors that influence young graduates' decisions to stay for a job in the lagged regions after university graduation. The remainder of this study is organized as follows. Section 2 reviews the previous studies on the determinants that retain human capital in lagged regions. Section 3 discusses the result of the bivariate probit model with sample selection. The final section discusses conclusions and future research.

## 2. Literature Reviews

Many studies on urban agglomeration have shown what makes well-educated people move to regions, which helps to fortify the absorptive capacity of regions [2,8,9]. However, attracting well-educated people could be challenging to lagged regions [10]. Young graduates' behavior in returning to lagged regions has been noted in a growing number of inter-regional migration studies [3,11]. Few studies have analyzed the determining factors of young graduates staying in lagged

regions. There have been a few studies on why people continue to stay in their communities [7,12]. Young workers are expected to be highly mobile because they can minimize their concerns regarding lifecycle and family [13]. They have many opportunities for transition from unemployment to employment because of their ability to adapt to new technology skills and fast-changing jobs [14]. Their decision as to where to stay is closely relevant to job opportunities, which was different from the older generation's choice to stay in their current place of residence.

We would like to review the literature on (1) the migration patterns of people staying in lagged regions and (2) the behavior of young graduates returning to lagged regions. One of the primary issues in the previewed works was why people stay in their current residence despite fewer opportunities to obtain high wages. Of course, economic incentives positively influenced the decision to stay in, as well as to return to, lagged areas. Large opportunities for employment were expected to influence people's decisions to stay. Local public education satisfied the needs people have for their regional communities due to a high rate of return to education regardless of whether by in-migrants or natives of the local area [15]. Graduates with a teacher's degree or a degree in applied science had a strong tendency to remain in their university region [5,16]. They could easily enter the regional labor market because of high consistency between their field and the regional labor market. These subjects might be more oriented toward the practical use of knowledge and skills than natural sciences, social science, or the humanities [17].

However, even without direct monetary rewards, social networks accounted for the likelihood of graduates staying in their university region in terms of the maximization of graduates' contacts with regional companies as well [6]. Particularly, self-employed graduates were more likely to stay in their university region due to a large demand for a business network. In addition to economic incentives, non-economic benefits have been known to explain people staying. A feeling of belonging or being similar to those living in a neighborhood has been known to reduce the probability of people leaving current areas [7,12]. Similarly, the effect of place-based factors, such as the ability to meet people and make friends, explained people staying in their current place of residence [18]. On the other hand, the propensity to be immobile varied depending on time and the level of regional urbanization. For example, many graduates did not leave their university regions within 10 years after graduation. In addition, this propensity decreased when they had a partner, children, or strong family ties, owing to the high costs of out-migration. [5,10,19].

Another finding is that young graduates have been widely known to return due to economic benefits [3,10,20]. Ample opportunities for labor performance and high wages were expected to be the main reasons for graduates to return [1,2,21]. They were likely to go back to regions for job security and opportunities to be hired by top research institutes [22], while low unemployment rates did not seem to be an attractive condition. A conditional effect with respect to the relative unemployment rate between the origin and destination was significant for the return of young graduates. Specifically, earlier findings provided empirical evidence that when the unemployment rate of a destination region was less than 12.7% of the unemployment rate of their region of origin, graduates did not go back to those regions [20]. Sometimes, even with many economic incentives, such as high wages, job opportunities, and huge investments in higher education, graduates did not return to regions unless the economy was developed in those regions. Individual experience affected young graduates' return to lagged regions. Young graduates were likely to go back when they attended a college near to their hometown or they had job experience outside the region [21]. Lots of young graduates returned to their hometown as self-employed workers [11]. People from rural areas were more likely than those from large cities to return to lagged regions. Ties with family, friends, and comfort from familiarity were positively associated with graduates deciding on their mobility pattern [23–25].

In sum, wages, job security, and ties to family and friends are known as three major factors to induce young graduates to move to lagged regions. Additionally, these factors have the same impacts on keeping people living in their current place of residence, even in lagged regions. However, previous work has not been concerned with the determining factors of young college graduates' decisions to

stay in lagged regions. This paper is mainly concerned with the analysis of the impact of the familiarity of the hometowns or the university regions of young graduates on their decisions to stay in lagged regions after graduation.

### 3. Analysis

#### 3.1. Methodology

Korea consists of 226 cities and counties, 65 of which are included in the Seoul Metropolitan Area (SMA), and the rest are in the non-Seoul Metropolitan Area (non-SMA). The SMA is the developed region and the non-SMA is the lagged region in terms of economy and population density. We had eight types of high-school graduates' decisions concerning university and jobs within the leading regions and the lagged regions, as illustrated in Figure 1. In this study, we analyzed only type 8—high-school graduates from lagged regions who go to colleges within lagged regions and get a job within lagged regions after graduation.

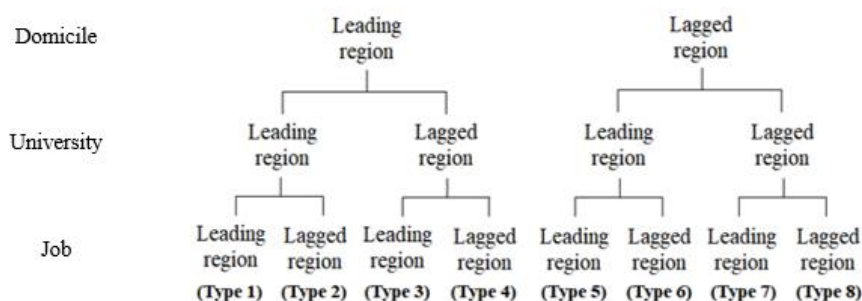


Figure 1. Eight types of graduate migration.

We used a bivariate probit model with sample selection, which allowed for control over self-selection bias when individuals were making two-stage decisions regarding the location of their universities and jobs. Applying a bivariate probit model with sample selection yielded consistent estimates of the explanatory variables when a young graduate's location decision regarding a job was conditional on the decision they had made regarding their university's location [26]. Whether graduates studied in leading regions or in lagged regions affected their location choice for a job. In this respect, this method identified the migration patterns of the graduates who studied at the colleges in lagged regions compared to those in leading ones. While university students stayed in lagged regions for education, they built their own social networks in the lagged regions. After graduation, they might have found jobs in the university regions in order to maintain emotional comfort and to rely on social contacts.

This study classified the independent variables into two types of individual background and regional components and was particularly interested in the spatial variables for hometown and university regions. We took into account that young graduates are less likely to move to lagged regions even though employment and high-income potential are high in the regions as noted in previous research [3,4,20]. Thus, this study was mainly concerned with the non-economic factors of regional components, such as family or friend ties and affection toward student colleges. Our model was derived from the literature on young graduates' return migration. High-school graduates' location choice of university was assumed to be affected by education and R&D investment, the existence of a state-owned university within a lagged region, and their interactions [20,27], as shown in Equation (1). An increase in R&D expenditure could affect the economies of scale of outputs, so it is possible to examine whether there are economies of scale with respect to university students using the interaction effect of R&D investment and state-owned universities. In addition, the decision regarding job location of graduates who studied at colleges in lagged regions depended on employment opportunities and high wages [1,2], job security [22], the location of job experience, living cost and self-employment [5,21],

and ties with family and the emotional comfort gained from familiarity [7], as shown in Equation (2). A brief description of the variables is summarized in the Appendix A.

$$LUNIV_i = \alpha_0 + \alpha_1 GEND_i + \alpha_{2ki} FEDU_{ki} + \alpha_3 \ln FINC_i + \alpha_4 KAT_i + \alpha_5 \ln RINC_{ir} + \alpha_6 \ln POP_{ir} + \alpha_7 \ln RDU_{ir} + \alpha_8 (\ln RDU_{ir})^2 + \alpha_9 SOU_{ir} + \alpha_{10} (\ln RDU_{ir} \times SOU_{ir}) + \alpha_{11} RTMA_{ir} + \alpha_{12} (\ln RINC_{ir} * RTMA_{ir}) + \alpha_{13} (\ln POP_{ir} * RTMA_{ir}) + \varepsilon_{1i} \quad (1)$$

$$LJOB_{(i|LUNIV=1)} = \beta_0 + \beta_1 GEND_i + \beta_{2mi} MJR_{mi} + \beta_3 GRADE_i + \beta_4 GRDLATE_i + \beta_5 EXPRGW_i + \beta_6 EXPSL_i + \beta_7 RGW_i + \beta_8 \ln WAGE_i + \beta_9 \ln LCOST_i + \beta_{10} HIND_i + \beta_{11} (HIND_i \times MJR_{(i|m=3)}) + \beta_{12} \ln RINC_{ir} + \beta_{13} \ln POP_{ir} + \beta_{14} DR + \beta_{15} UR_i + \varepsilon_{2i} \quad (2)$$

where subscripts  $i$  and  $r$  refer to the individual and region at the state level, respectively.

The Korean Graduate Occupational Mobility Survey was performed for each graduate during the year following college graduation in winter 2010 and two years later. The number of data samples was 18,078 graduates, representing four percent of all graduates in Korea in the year 2010. It provides information on each subject's attributes in the transition from school to the labor market including gender, age, college major, parental income, work experience, and occupational category (employee or self-employed). These individual data were combined with regional information provided by Statistics Korea. This survey showed that 84.2% of the graduates from lagged regions studied at the college in those regions, and 81.3% of these graduates chose a job in the lagged regions. Table 1 shows descriptive statistics of the explanatory variables. The correlation coefficients of the variables are shown in the Appendix A.

**Table 1.** The description statistics of the explanatory variables.

Variables	Mean	S.D.	Min	Max
GEND	0.583	0.493	-	-
FEDU <sub>h</sub>	0.435	0.496	-	-
FEDU <sub>u</sub>	0.216	0.412	-	-
FEDU <sub>g</sub>	0.062	0.241	-	-
ln(FINC)	1.302	0.491	0.000	2.303
KAT	0.159	0.366	-	-
ln(RINC) <sup>+</sup>	0.302	0.742	-2.190	3.512
ln(POP) <sup>+</sup>	0.246	0.626	-1.913	2.954
ln(RDU)	12.834	1.859	7.659	15.993
SOU	0.722	0.448	-	-
RTMA	0.237	0.425	-	-
MJR1	0.078	0.268	-	-
MJR2	0.280	0.449	-	-
MJR3	0.259	0.438	-	-
MJR4	0.118	0.322	-	-
MJR5	0.096	0.295	-	-
MJR6	0.087	0.282	-	-
GRADE	3.738	0.412	1.000	4.500
GRDLATE	0.114	0.317	-	-
EXPRGW	0.042	0.202	-	-
EXPSL	0.017	0.130	-	-
RGW	0.303	0.460	-	-
ln(WAGE)	5.374	0.593	0.000	7.419
ln(LCOST)	0.275	0.875	-2.384	3.512
HIND	0.052	0.222	-	-
ln(RINC) <sup>++</sup>	0.144	0.614	-2.415	2.331
ln(POP) <sup>++</sup>	0.219	0.735	-2.286	2.919
DR	0.474	0.499	-	-
UR	0.486	0.500	-	-

**Note:** Unit is one thousand US dollars in father's income when an individual entered university (FINC) and education R&D investment per research manpower (RDU), regional income of destination region compared to origin region (RINC), population of destination region compared to origin region (POP), present monthly wage of the present job compared to reservation wage (WAGE), and the level of living cost of destination region compared to origin region (LCOST). <sup>+</sup> indicates the variables of university region compared to domicile region and <sup>++</sup> means the variables of job location compared to university region.

### 3.2. Result

Table 2 shows the results of the bivariate probit model with sample selection. The rho value ( $\rho$ ) was  $-0.359$ , which was estimated to be significantly different from zero, determining the presence of sample selection; a univariate decision model would have been inefficient. The negative sign of the rho value explained that the probability that an individual who studied in a lagged region decided to stay for a job in the region was higher than the probability that an individual who studied in a leading region decided to return for a job to a lagged region. The result of the first step decision was as shown in the left panel of Table 2. The male dummy had a positive and statistically significant coefficient (0.545), which suggested that with all else being equal, males had a stronger tendency to stay to study in lagged regions than females. The students whose fathers were highly educated tended not to choose a university in a lagged region, showing negative values and being statistically significant at the 1% level. Highly educated fathers would want them to study in the leading regions, where a high quality of educational institutions is densely distributed. The variable of the Korean scholastic aptitude test (KAT) was used to control one of the Korean university attributes—that scores are significantly higher in leading regions. With an increase in educational investment in lagged regions, the probability that a student leaves the areas was expected to decrease with a convex shape, showing a negative linear term ( $-15.060$ ) and a positive square term (0.600) (significant at the 1% level). The presence of state-owned universities (SOU) and the product term between educational investment and the presence of a state-owned university (see  $RDU \times SOU$ ) showed a positive (3.329) and negative sign ( $-0.291$ ) with statistical significance, respectively. The investment made in universities in lagged regions failed to encourage students to choose regional universities. However, in the case that a state-owned university was available in their hometown area, high-school graduates were likely to go to the university. These universities emphasize teaching and learning rather than research, which has positive effects on high-school students' decisions to be willing to work in these regions. Analysis of a variable of distance from Seoul (central city) showed that the students in a lagged region far from Seoul were less likely to go to a local university, showing the coefficient of  $-2.045$  (significant at the 1%-level). The signs of regional income and population were negative ( $-9.027$ ) and positive (5.828), which were statistically significant at the 1% level, respectively. This means that the students considered urban benefits when making the decision to attend college in lagged regions, rather than the regional economic level. The higher the income gap between the hometown and the aspiring university region was, the higher the number of students who went to the leading region, in particular if a lagged region was located far from Seoul. Meanwhile, students were less likely to move to a leading region even when the population of the university region was large, even more so for students from a region far from Seoul. This means, however, that some regions with relatively lower income had locational advantages in terms of inducing university students (see  $RINC \times RTMA$  and  $POP \times RTMA$ ).

The result of the second step decision was as shown in the right panel of Table 2. For the major variables of this study, the values of the consistencies between domicile and job location (see DR) and between university and job location (see UR) were positive values, and these variables were statistically significant at the 1% level. This implied that family or friend ties and affection toward home villages and student colleges were associated with deciding on jobs or residential areas not only for retirees and the middle-aged but also for young graduates. This result is consistent with earlier findings [7,12] that people were likely to stay in their current place of residence due to a strong preference for their hometown. In addition, the coefficient of the spatial consistency between university and job location (2.017) was higher than that between domicile and job location (0.462). Namely, young graduates were willing to find jobs in the region of their university rather than their hometown: staying in a university region could provide young graduates with the opportunities to maintain their social network and to maximize their contacts within local companies [6,21].

**Table 2.** Estimation of bivariate probit model with sample selection.

Study in the Lagged Regions				Stay for Job in the Lagged Regions			
Variables	Coefficient		Standard Error	Variables	Coefficient		Standard Error
Intercept	94.755	***	12.289	Intercept	1.233	**	0.505
GEND	0.545	***	0.113	GEND	−0.018		0.077
FEDU <sub>h</sub>	−0.350	***	0.098	MJR1	−0.254		0.166
FEDU <sub>u</sub>	−0.605	***	0.118	MJR2	−0.026		0.133
FEDU <sub>g</sub>	−0.636	***	0.190	MJR3	−0.255	*	0.136
ln(FINC)	−0.134		0.086	MJR4	−0.111		0.149
KAT	0.372		0.307	MJR5	−0.111		0.151
ln(RINC)	−9.027	***	0.571	MJR6	−0.188		0.160
ln(POP)	5.828	***	0.601	GRADE	−0.033		0.085
ln(RDU)	−15.060	***	1.878	GRDLATE	−0.174		0.108
(lnRDU) <sup>2</sup>	0.600	***	0.072	EXPRGW	0.586	***	0.191
SOU	3.329	***	0.534	EXPSL	−1.240	***	0.262
ln(RDU)×SOU	−0.291	***	0.103	RGW	−0.206	***	0.072
RTMA	−2.045	***	0.296	ln(WAGE)	−0.050		0.068
ln(RINC)×RTMA	−6.773	***	2.029	ln(LCOST)	−0.860	***	0.226
ln(POP)×RTMA	7.241	***	1.776	HIND	0.258		0.255
Rho(ρ)	−0.359	***	0.117	HIND×MJR3	0.671	*	0.352
				ln(RINC)	−0.021		0.057
				ln(POP)	−0.041		0.256
				DR	0.462	***	0.082
				UR	2.017	***	0.137
Number of observations			5232				1294
Log likelihood				−1551.044			
Wald chi2 (20)				1045.57			
Prob > chi2				0.000			

**Note:** \*\*\* significant at 1% level; \*\* significant at 5% level; \* significant at 10 % level.

Young graduates who majored in engineering had a higher tendency to migrate to leading regions than those who majored in humanities, social science, natural science, medicine, and art and physical education, having a negative coefficient (−0.255) with statistical significance. Young graduates who majored in engineering might have had the advantage of getting a job in a leading region, despite graduating from a college in a lagged region, due to the large demand for high technology. The variable of graduating more than one year late showed a negative coefficient, explained by the fact that the young graduates had prepared to get a proper job (i.e., a stable or permanent high-paying job) in leading regions, but this did not have a statistically significant effect on the mobility pattern. The coefficients of prior experience in a stable job and in the central city of Korea, Seoul, were 0.586 and −1.240 (significant at the 1%-level), respectively. Students who graduated from a university in a lagged region were more likely to land a job in a lagged region if they were experienced in taking a full-time job and less likely to do so if they had worked in the central city before. Young graduates would not have chosen to transit from a full-time job to a part-time job, and were likely to stay in a lagged region for job security because it is less competitive to take a full-time job in lagged regions. Additionally, graduates who have worked in the central city would have wanted to enjoy the urban benefits more, such as urban public services. In addition, they were more likely to work as a part-timer compared to students who were hired in a leading region, showing a negative sign (−0.206). This result is in line with the analysis result that the living cost variable had a negative value (−). Meanwhile, the value for wage was positive with statistical insignificance. The value of the product term between a major in engineering and regions with heavy industry was positive (statistically significant at the 10% level), showing locational advantages of regions agglomerated with heavy industries (HIND×MJR3).



#### 4. Conclusions

This study identifies the factors that have effects on college graduates' decisions to stay for a job in lagged regions by using a bivariate probit model with sample selection. The results show that a strong preference for a graduate's home village contributes to decisions regarding job location for the regions. In addition, low living costs have a great significant impact on the spatial choice compared with economic factors such as levels of wage and job security. Consequently, the long-term economic growth of lagged regions depends on the preference of high-school graduates to attend local universities.

Our results of the second step decision model concerning the preference for graduates to stay in the region of their university reveals that the university-related variables, such as a state-own university and the educational investment of the first step decision model are important in shedding light on the strategies of regional educational investment. Once a high-school graduate has been attracted to a local university, he/she is expected to remain in the local community for a long time. Educational investment has been emphasized as a driving force to pursue a balanced development of regions in endogenous economic growth theory. However, this result shows that the highest priority should be placed on enhancing the competitiveness of the universities in terms of the size and the status of the universities with expanded investment in lagged regions. In addition, living expense is one of the significant factors for graduates deciding on job location. That is, young graduates who studied at colleges in lagged regions could search a few places among the regions when they decide to stay for a job in lagged ones to maximize their net income (wage minus living cost). Additionally, they tend to consider expenses more than revenues because ties with family, emotional comfort from the familiarity of their hometown, and opportunities to maintain their social network are significant to them rather than maximizing their economic utility, such as income and job security. However, in terms of implementing regional policies, this is not significant in affecting their locational choices because housing and basic living necessities are priced low in most regions in Korea except for Seoul.

Concerning issues for further research, it would be interesting to examine the effects of each type of university on the migration of young graduates. Universities could be classified into three categories, such as (1) public universities or private schools, (2) research-intensive universities or teaching-focused colleges, and (3) national universities or regionally accredited institutions. In addition, financial aids, including scholarships, could affect high-school graduates' mobility patterns. We could analyze the impact of each type of university on young talented students' choices to stay for jobs in lagged regions. The results of this work are expected to influence the implementation of regional policies to facilitate population inflow into lagged regions through education investment in local universities.

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## Appendix A

Table A1. Description of the variables

Variables	Name	Definition
Dependent	LUNIV	University within the non-SMA (=1)
	LJOB	Job within the non-SMA (=1)
Individual background	GEND	Male (=1)
	FEDUK	Father received a middle-school education (reference) k = H if father received a high-school education (=1) k = U if father received a university education (=1) k = G if father received a graduate-school education (=1)
	FINC	Father's income when an individual entered university
	KAT	Korean scholastic aptitude test level, high score (=1)
	MJRm	m = 1 if humanities (=1) m = 2 if social science (=1) m = 3 if engineering (=1) m = 4 if natural science (=1) m = 5 if medicine (=1) m = 6 if art and physical education (=1) m = 7 if education (reference)
	GRADE	College grade
	GRDLATE	Graduation more than one year late (=1)
	EXPRGW	Job experience of regular work condition (=1)
	EXPSL	Job experience in Seoul (capital city of Korea) (=1)
	WAGE	Present monthly wage of the present job compared to reservation wage
Regional components	RGW	Regular worker (=1)
	LCOST	The level of living cost of destination region compared to origin region
	HIND	Heavy industry or resource-oriented industry of the present job (=1)
	RTMA	When his/her domicile is a metropolitan area remote from the capital city, over 300 km (e.g. Gwangju, Ulsan and Pusan)
	RINC	Regional income of destination region compared to origin region
	POP	Population of destination region compared to origin region
	RDU	Education R&D investment per research manpower
	SOU	State-owned university existing within domicile region (with twenty thousand students)
	DR	Consistency between domicile and job location (=1)
	UR	Consistency between university and job location (=1)

Table A2 shows Pearson's correlation coefficients of the explanatory variables used in the job location choice model. The correlation coefficients between  $\ln(\text{POP})$  and  $\ln(\text{LCOST})$ ,  $\ln(\text{RINC})$  and  $\ln(\text{LCOST})$ , and  $\ln(\text{POP})$  and  $\ln(\text{RINC})$  are measured as 0.983, 0.539, and 0.451, respectively, and are relatively higher than the other coefficients that were denoted in superscript +.



**Table A2.** The correlation coefficients of the explanatory variables.

	GEND	MJR1	MJR2	MJR3	MJR4	MJR5	MJR6	GRADE	GRDLATE	EXPRGW
GEND	1.000									
MJR1	−0.067	1.000								
MJR2	−0.025	−0.182	1.000							
MJR3	0.351	−0.173	−0.371	1.000						
MJR4	−0.034	−0.107	−0.229	−0.218	1.000					
MJR5	−0.148	−0.094	−0.202	−0.192	−0.119	1.000				
MJR6	−0.079	−0.089	−0.191	−0.182	−0.112	−0.099	1.000			
GRADE	−0.205	−0.018	0.070	−0.109	−0.066	0.026	0.043	1.000		
GRDLATE	0.064	0.064	−0.040	0.074	0.023	−0.033	−0.060	−0.187	1.000	
EXPRGW	−0.041	0.016	−0.005	−0.031	0.016	0.020	0.025	−0.039	−0.027	1.000
EXPSL	−0.061	0.022	−0.010	−0.038	−0.007	0.022	0.046	−0.028	0.008	0.426
RGW	−0.069	0.030	−0.027	−0.028	0.034	0.045	0.015	−0.031	−0.058	0.241
ln(WAGE)	0.261	−0.039	−0.045	0.177	−0.043	0.028	−0.112	−0.080	0.120	−0.082
ln(LCOST)	0.008	−0.011	−0.036	0.039	−0.018	0.056	0.002	0.020	0.025	0.009
HIND	0.124	−0.016	−0.024	0.169	−0.024	−0.068	−0.050	−0.023	0.004	−0.049
ln(RINC)	0.021	−0.011	−0.011	0.022	−0.001	0.013	0.016	0.025	0.011	−0.009
ln(POP)	0.014	−0.016	−0.041	0.051	−0.016	0.054	−0.005	0.015	0.029	0.005
DR	−0.101	0.005	0.055	−0.103	0.013	−0.009	0.022	0.044	−0.164	0.044
UR	−0.038	0.011	0.085	−0.082	−0.001	−0.038	−0.005	0.014	−0.019	−0.001
	EXPSL	RGW	ln(WAGE)	ln(LCOST)	HIND	ln(RINC)	ln(POP)	DR	UR	-
EXPSL	1.000									-
RGW	0.135	1.000								-
ln(WAGE)	−0.020	−0.075	1.000							-
ln(LCOST)	0.058	0.044	0.024	1.000						-
HIND	−0.031	−0.155	0.121	−0.061	1.000					-
ln(RINC)	0.057	0.035	0.029	0.539+	−0.016	1.000				-
ln(POP)	0.052	0.035	0.030	0.983+	−0.055	0.451+	1.000			-
DR	−0.071	0.023	−0.187	−0.371	−0.016	−0.253	−0.363	1.000		-
UR	−0.047	−0.054	−0.070	−0.268	−0.009	−0.216	−0.250	0.340	1.000	-

**Note:** Pearson correlation coefficient ranges from −1 to +1, where +1 is positive linear relation, 0 is no linear relation, and −1 is negative linear relation.

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