

## **The role of Universities in the Development of Local Economies: A Case Study in the western of Jeonnam**

Sung Hyun Park<sup>1</sup>, Ki Kibeom Kim<sup>2</sup>

<sup>1</sup> *Assistant Professor, Department of Liberal Arts/Institution for Marine and Island Cultures, Mokpo National University, Korea*  
*sunghyun79@mnu.ac.kr*

<sup>2</sup> *Associate Professor, Department of Business Administration, Mokpo National University, Korea*  
*[kibum2005@hanmail.net](mailto:kibum2005@hanmail.net) (corresponding author)*

### **Abstract**

*As a result of this study, the income generation effect generated by regional universities for the region is KRW 130.6 billion (direct and indirect income effect KRW 90.9 billion, induced income effect KRW 39.6 billion). In addition, it is estimated that the effect of regional universities on inducing employment in the region is 2,145 per year. Unless quality jobs are secured, the outflow of population to the metropolitan area will accelerate, and the disappearance of local areas will emerge as a social problem in the near future. Considering the effect of local universities on the local economy revealed through the results of this study, that is, the income and job creation effects, the government will be able to prevent local extinction by providing bold financial support to local universities. If it is difficult to afford it with government finances alone, it can be solved by opening the door to universities for admission through donations, which many advanced countries are introducing..*

**Keywords:** *Income creation effect of local universities, Employment creation effect of local universities, Regional economic effects created by regional universities*

### **1. Introduction**

Students and faculty members of local universities contribute to maintaining the local commercial district and revitalizing the economy through consumption activities and job creation [1][2]. In addition, local universities play an important role in forming social capital in the community and establishing local identity as the center of the community [3]. Currently, the closure of universities in the provinces is a reality amidst the crisis of population cliffs, which has a very negative impact on the local economy. In addition, the outflow of the population to the metropolitan area is further accelerating the disappearance of the provinces. As the youth of the provinces are concentrated in the metropolitan area, the provinces are hollowing out and causing a serious low birth rate, accelerating the disappearance of the provinces.

---

Manuscript Received: February. 27, 2023 / Revised: March. 3, 2023 / Accepted: March. 6, 2023

Corresponding Author: [kibum2005@hanmail.net](mailto:kibum2005@hanmail.net)

Tel: +82-61-450-2619, Fax: +82-61-260-1703

Associate Professor, Department of Business Administration, Mokpo National University, Korea

Young people are migrating from rural areas to the metropolitan area for reasons such as college admission, marriage, and employment. Corona 19 is further accelerating fat loss by pouring oil here. Therefore, this study analyzes the effect of the economic activities of college students in the western Jeonnam area on the local economy, and based on this, examines the need for local universities and their role.

## **2. Prior Research, Theory and Hypothesis**

Local universities have various influences on regional development. The effects of universities on national or regional development are very diverse and extensive [4]. They also shows that the influence of local colleges on regional development differs according to the region of origin of students entering the local university and the region of employment after graduation. Second, local universities are the foundation of industry-university cooperation and regional innovation systems, and by playing a diffuse role, they induce endogenous regional development while creating new industries and jobs in the region. Third, educated manpower changed the structure of residents' political consciousness, cultivated a sense of community and development-oriented consciousness, and played a role in leading community integration.

Next, from the perspective of balanced development, advanced countries entering the era of the 4th industrial revolution place their future national destiny in universities. Talented people tend to flock to universities in areas with good universities, and there is no area that is underdeveloped compared to areas with good universities. It means that the university and the local community become one and that the driving force leading the region lies in the local university. Ahn Young-jin (2010) analyzed the regional economic ripple effect of universities through the case of German universities [5]. As a result of the analysis, if there is a local university in a local city, the average of large cities is 1.39 times, the average of medium cities is 1.46 times, and the average of small cities is 1.20 times. In addition, when looking at the regional ratio, it can be seen that the rate of utilization in small cities is lower than that in large cities. Steinacker (2005) analyzed the economic effect of the area where Claymont University is located based on a consumption pattern survey of university members, and estimated that the direct and indirect economic effect exceeded 10 million dollars per year, and the direct expenditure effect and the result The multiplier effect caused by [6].

## **3. Analysis of economic activity effect of local college students - Economic effect through regional industry linkage table**

The regional industry linkage table is an input-output table created by dividing the country into regional economic units and reflecting the characteristics of interregional migration and industrial structure by region [7, 8]. This study analyzed using the 2015 regional industry linkage table announced in July 2020. In the analysis process, the consumption expenditures of college students in the area where the university is located were investigated, and based on this, a link-industry analysis model was applied to estimate direct and indirect regional economic effects. Looking at the contents of the analysis model, it is largely divided into direct and indirect income effects, induced income effects, and employment inducement effects. The direct and indirect income effect occurs as the final demand in the South Jeolla region increases due to college students' consumption expenditure. The induced income effect is the increase in added value caused by the additional labor income of local residents as a direct or indirect effect, resulting in an increase in household expenses [9, 10, 11]. The employment inducement effect is the increase in the number of employed people resulting from final demand expenditure in the region. In order to set the conditions for applying the model, the consumption expenditure of university students was recalculated. In other words, the amount of consumption expenditure

must be adjusted to apply the survey results to the analysis model. The housing cost was calculated by excluding cases where there were no errors or omissions or actual housing costs among the university students surveyed. Table 1 below shows the number of respondents by residence and type of residence.

**Table 1. Number of Respondents by Residence and Residence Type**

(unit: persons)

Division	[e]	[f]	[g]	[h]	[i]	Sum	[j]	[k]	[l]
[a]	7	6	3	30	11	57	13	30	14
[b]	36	20	6	53	15	130	16	55	59
[c]	28	13	3	17	11	72	11	18	43
[d]	62	21	2	7	6	98	14	1	83
Total	133	60	14	107	43	357	54	104	199

[a] Areas within the range of economic benefits due to universities

[b] Jeonnam region where economic effects from universities do not occur

[c] Gwangju Metropolitan City, which does not generate economic effects from universities

[d] Other areas

[e] Students living in dormitories

[f] Student living on rent

[g] Students living with only a deposit without paying rent

[h] Students living in a family-owned home with no rent

[i] Students living in a family-owned home with no rent

[j] Students excluded due to errors or omissions, etc.

[k] Students excluded because they cannot be research subjects

[l] Study Subject Student (Final)

Table 1 [e], [f], that is, the target students of this study, the monthly housing cost per person is 314,300 KRW, and the bench of students who do not belong to [e], [f], that is, the target students of this study In the case of Mark, the monthly housing cost per person is 100,000 KRW. This suggests that for students residing in the area where the university is located, the average monthly housing cost is 100,000krw per person, regardless of housing type. . These results are as presented in Table 2 below.

Table 3 shows the consumption expenditure by consumption behavior and residential area of the university students in the study. Savings are excluded as they are not consumption expenditures, and telecommunications expenses are also excluded as they are expenditures not related to the local economy. University students residing in the university area spend money in the order of food and beverage purchases, clothing miscellaneous goods purchase, and cultural life consumption, while college students living outside the university location spend expenses in the order of food and beverage purchases, cultural life consumption, and clothing miscellaneous goods. appeared to do.

**Table 2. Average monthly housing cost per person by residence type**

(unit: persons, KRW)

Division	[l]		[k]+[l]	
	Number of students	Average per person	Number of students	Average per person
[a]	14	314,300 KRW	44	100,000 KRW
[b]	59	309,300 KRW	114	160,100 KRW
[c]	43	303,500 KRW	61	213,900 KRW
[d]	83	291,000KRW	84	287,500 KRW

**Table 3. Monthly Consumption by Item (Excluding Housing)**

(unit: KRW)

	[a]	[b]	[c]	[d]	Average	note
expenditure 1	183.2	186.0	177.6	196.4	186.7	(*)
expenditure 2	135.1	130.3	113.8	123.1	125.7	
expenditure 3	139.6	129.3	131.3	124.4	130.0	(*)
expenditure 4	117.4	106.7	89.3	96.8	102.2	
expenditure 5	59.6	45.8	39.9	56.5	49.7	
expenditure 6	80.4	65.7	56.9	72.6	68.2	
expenditure 7	86.9	77.2	66.5	76.6	76.4	
Total	802.3	741.0	675.2	746.4	739.0	

[expenditure 1] Expenditures related to the purchase of beverages and food

[expenditure 2] Expenses for cultural life and leisure

[expenditure 3] Expenditures to buy clothes and sundries

[expenditure 4] Spending for savings

[expenditure 5] Health and Medical Spending

[expenditure 6] Internet and mobile expenses

[expenditure 7] Transportation cost

(\*) Segmented by online shopping or not

The university students in the study do a lot of online shopping, and the related consumption expenditure will have very little relevance to the local economy. In this regard, this study classifies the consumption behavior of college students, and separates food and beverage and apparel miscellaneous goods shopping from online sales and non-online sales to examine the relevance to the local economy. The online shopping mall usage amount has no direct effect on final demand in the area where the university is located, so it should be

excluded. As a result of calculating the online usage rate using the total sales amount of food and beverage expenses and clothing miscellaneous goods and online sales amount, the average value from the first quarter to the third quarter of 2021 was applied to this analysis. Since university students are in their 20s, the percentage of online users in their 20s compared to the total was calculated using the percentage of online users by age and the average monthly purchase frequency. The ratio of those in their 20s to be applied to this analysis was estimated as the average value of 1.506 of the ratios calculated in 2019 and 2020. Calculating the proportion of university students spending in the area where the university is located considering online use, the cost of food and beverages is 71.4% and the cost of clothing and miscellaneous goods is 45.2%. The related analysis results are presented in Table 4 below.

**Table 4. Ratio of internet shoppers and monthly average purchase frequency**

(unit: %, time)

Year	Division	Ratio of internet shoppers	Average monthly purchase frequency	Total	Percentage of people in their 20s (B/A)
2018	All	62.0	3.0	186.0(A)	1.607
	Twenties	96.4	3.1	298.8(B)	
2019	All	64.1	3.3	211.5(A)	1.603
	Twenties	96.9	3.5	339.2(B)	
2020	All	69.9	5.0	349.5(A)	1.409
	Twenties	94.7	5.2	492.4(B)	

data source : Korea Internet & Security Agency, 「Survey on Internet Usage」

Looking at the amount of consumption expenditure that directly affects final demand in the area where the university is located, per college student living in the area where the university is located is 580,000 KRW per month, 600,000 KRW per student in the Jeonnam area outside the area where the university is located, 620,000 KRW in Gwangju, and 620,000 KRW per student in other areas. It is 740,000 KRW. The average consumption expenditure per college student adjusted for the proportion by residence is 640,000 KRW per month. By category, housing costs 200,000 KRW, food and beverage costs 130,000 won, cultural and living expenses 130,000 KRW, clothing and miscellaneous goods costs 60,000 KRW, health and medical expenses 50,000 KRW, and transportation costs 80,000 KRW. It is a circle. The average total amount of expenditure per college student, including online, is 830,000 KRW per month. These results are shown in Table 5 below.

The average residence period of college students living in the area where the university is located was 9.3 months. As a result of applying the Jeonnam Regional Industry Linkage Table (2015) based on the results of the survey from the university students, as a result of the analysis, the university students in the western Jeonnam region earned 5,966,000 won per person per year (642,000 won per month multiplied by 9.3 months).

**Table 5. Monthly consumption expenditures affecting final demand in the area where the university is located**

(unit: KRW 1,000)

	[a]	[b]	[c]	[d]	average	note
Housing cost	100.0	160.1	213.9	287.5	197.5	*
Expenditure1	130.8	132.8	126.8	140.2	133.3	**
Expenditure2	135.1	130.3	113.8	123.1	125.7	
Expenditure3	63.1	58.4	59.3	56.2	58.8	**
Expenditure5	59.6	45.8	39.9	56.5	49.7	
Expenditure7	86.9	77.2	66.5	76.6	76.4	
Sum	575.6	604.6	620.2	740.2	641.5	
Total	784.9	794.4	799.8	937.1	834.3	***

[expenditure 1] Expenditures related to the purchase of beverages and food

[expenditure 2] Expenses for cultural life and leisure

[expenditure 3] Expenditures to buy clothes and sundries

[expenditure 5] Health and Medical Spending

[expenditure 7] Transportation cost

[Sum] Expenditure 1, 2, 3, 5, 7 Total

\* : Subjects of research [k] and [l] Basic

\*\* : Does not include spending on shopping online

\*\*\* : without expenditure 4

It is estimated that consumption expenditure will contribute to the annual income generation of 5,782 thousand won per college student in the region. It is estimated that 4,027,000 won will be generated due to an increase in production and added value in the region due to consumption expenditure, and the generated income will lead to an increase in household consumption of local residents, resulting in an induced income effect of 1,755,000 won. When applied to 22,582 students of universities in the western Jeonnam area in 2020, the annual consumption expenditure is KRW 134.7 billion, and the resulting total income creation effect is KRW 130.6 billion. These results are shown in Table 6 below.

**Table 6. Income creation effect according to college student consumption expenditure**

(unit: KRW 1,000)

Item	Monthly expenditure per college student	Monthly expenditure per college student	Annual expenditure of college students in the western Jeollanamdo region
consumption expenditure	641.5	5,966	134,724,806
Direct and indirect income effect	433.0	4,027	90,937,714
induced income effect	188.7	1,755	39,631,410
Total	621.7	5,782	130,569,124

The scale of job creation in the Jeonnam-western region due to university students' consumption expenditure is estimated to be 2,145 per year. Based on the major category items in the inter-industry table, each job creation effect is shown in Table 7 below.

**Table 7. Number of employment inducements by category**

Item	Employment incentives (unit: persons)
Restaurant and lodging service	507.1
Arts, sports and leisure related services	481.8
Wholesale and retail and product brokerage services	427.9
Health and social services	250.3
Real estate service	135.9
Transportation service	119.3
Agricultural, forestry and fishery products	77.2
Business support service	44.1
Food and drink	24.8
Financial and Insurance Services	21.8
Other services	17.9
Information communication and broadcasting service	6.5
Erection	6.4
Water, waste disposal and recycling services	5.4
Professional, Scientific and Technical Services	4.2
Manufacturing toll processing and industrial equipment repair	4.2
Power, gas and steam	2
Public administration, defense and social security	1.2
Ducational service	1
Other	5.6

#### 4. Conclusion

Students and faculty members of local universities contribute to maintaining the local commercial district and revitalizing the economy through consumption activities and job creation. But, Young people are migrating from rural areas to the metropolitan area for reasons such as college admission, marriage, and employment. Corona 19 is further accelerating fat loss by pouring oil here. Therefore, this study analyzes the effect of the economic activities of college students in the western Jeonnam area on the local economy, and based on this, examines the need for local universities and their role.

The income-generating effect of KRW 130.6 billion will have a significant level of influence on local economic entities that are in a worse environment than the metropolitan area. Decent jobs have the most important effect on population outflow to the metropolitan area. Unless quality jobs are secured, the exodus of the population to the metropolitan area will accelerate the disappearance of local areas. The annual job creation

effect of 2,145 jobs created by local universities is judged to be a significant value to prevent this. Considering the role that local universities play in the local economy, the government's bold financial support would be a good investment in terms of efficiency. These economic effects will be maximized through bolder investments, and if it is difficult to meet them with only government finances, it will be important to increase the financial independence of local universities through contribution admissions, as in the case of advanced countries. In the case of OECD advanced countries, unconventional policies such as donation admission are being implemented for the financial independence of universities, and Korea is now discussing to solve problems that require national consensus, such as donation admission, etc. for the financial independence of local universities, which are the cornerstone of the local economy.

## References

- [1] J.H. Oh, "A Study on the effect to Regional Growth by Removing of Capuses to Local Area," Journal of Korea Community Development Society, Vol. 12, pp. 1-18, 1987. DOI:
- [2] B.H. Jun, "A Study on the Structure of Factors Influencing the Probability of Collaboration between University and Community," Journal of the Korean Regional Development Association. Vol. 31. No. 5, pp. 139-160, 2019.  
<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART002542616>
- [3] D.P. Cha, "Collegiate Sense of Community in Relations to College-related Characteristics," Korean journal of social science, Vol. 28, No. 1, pp. 169-183, 2006.  
<http://imgsvr.riss4u.net/contents/kdam10/A/35493/390/3549339001.pdf>
- [4] Y.K. Koh, "A Study on the Transformation of University Policies for Balanced Development and Publicness Establishment," Journal of Regional Studies, Vol. 29, pp. 1-29, 2012.  
<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART002738621>
- [5] Y.J. Ahn, "Regional wirtschaftliche Effekte der Hochschule: Dargestellt am Beispiel der Deutschen Hochschulen," Journal of the Economic Geographical Society of Korea, Vol. 13, No. 4, pp. 529-547, 2010.  
<https://scienceon.kisti.re.kr/commons/util/originalView.do?cn=JAKO201013351026650&oCn=JAKO201013351026650&dbt=JAKO&journal=NJOU00294294>
- [6] A. Steinacker, "The Economic Effect of Urban Colleges on their Surrounding Communities," Urban Studies, Vol. 42, No. 7, pp. 1161-1175, 2005. DOI:10.1080/00420980500121335
- [7] J. E. Choi, S. H. Hong, "The Impact of A National University Located in a Region on Its Regional Economy : The Case of Chonbuk National University," Journal of the Korean Regional Economics, Vol. 15, No. 2, pp. 41-57, 2017.  
<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiOrteView.kci?sereArticleSearchBean.artiId=ART002255560>
- [8] S.K. Kang, M. H. Lee, "The Impact of the local University on Regional Economy: -A Perspective on the Income Creation Effect," Journal of Economics Studies, Vol. 22, No. 3, pp. 254, 2004.  
<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART001150112>
- [9] T.H. Koh, Y.K. Cho, "A Study on the Problems and Improvements of University Polices from the Viewpoint of Region," Journal of the Korean Regional Economics, Vol. 40, pp. 79-98, 2018.  
<https://www.dbpia.co.kr/Journal/articleDetail?nodeId=NODE08969300>
- [10] S. D. Lim, "A Study on the Regional Development Effects of Local University," Journal of Korea Planning Association, Vol. 24, No. 1, pp. 67-90, 1989.  
<https://www.dbpia.co.kr/pdf/pdfView.do?nodeId=NODE01926631>
- [11] K. H. Park, I. W, Paik, "New Approaches to the Effect Analysis of the BK21 Project on Research Achievements of Universities," The Journal of Educational Administration, Vol. 26. No. 3, pp. 233-249. 2008.  
<https://www.dbpia.co.kr/journal/articleDetail?nodeId=NODE10615591>