

Transfer Students: Can We Predict Their Success? An Updated Study

REBECCA BOWYER (SAM HOUSTON STATE UNIVERSITY)

ALACIA VOTH (SAM HOUSTON STATE UNIVERSITY)



Purpose of Study

Sam Houston State University's transfer students make up about half of its incoming students each fall semester. The purpose of this study is to analyze the transfer students at Sam Houston State University and create a model to determine a student's likelihood of success (graduation) at SHSU. We will take into consideration factors such as students' demographics and their incoming academic data.



Previous Binary Logistic Regression with Backward Likelihood Ratio Outcome Model

$$\begin{aligned} \ln(y) = & -3.629 + .592x_{Age (0-19)} + .435x_{Age (20)} + .312x_{Age (21-22)} \\ & + .688x_{GPA (3.13-4.00)} + .435x_{GPA (2.75-3.12)} + .069x_{GPA (2.40-2.74)} + -.246x_{GPA (0.00-2.39)} \\ & + 3.451x_{Cred (69+)} + 3.306x_{Cred (55-68)} + 2.840x_{Cred (37-54)} + 1.876x_{Cred (0-36)} \\ & + .702x_{ACLD (Full-Time)} \\ & + -.312x_{Coll (COAS)} + .039x_{Coll (COBA)} + .327x_{Coll (COCJ)} + -.147x_{Coll (CHSS)} \\ & + -.110x_{FG (First Gen)} + .074x_{FG (Not First Gen)} \\ & + .184x_{IT (2yr)} \\ & + -.750x_{Dev (Yes)} \\ & + \epsilon \end{aligned}$$

Previous Binary Logistic Regression with Backward Likelihood Ratio Outcome Model

Comparison Group:

- Starting Age = 23 and Higher
- Transfer GPA = Unknown
- Transfer Credits = Unknown
- Academic Course Load = Part-Time
- College = College of Education
- First Generation = Unknown
- Institution Type = 4-Year Institution
- Developmental = No

Previous Binary Logistic Regression with Backward Likelihood Ratio Outcome Model

Most Likely to Succeed in this Model:

- Starting Age = 0-19
- Transfer GPA = 3.13-4.00
- Transfer Credits = 69 and Up
- Academic Course Load = Full-Time
- College = College of Criminal Justice
- First Generation = Non-First Generation
- Institution Type = 2 Year Institution
- Developmental = Yes

Previous Binary Logistic Regression with Backward Likelihood Ratio Outcome Model

Changes:

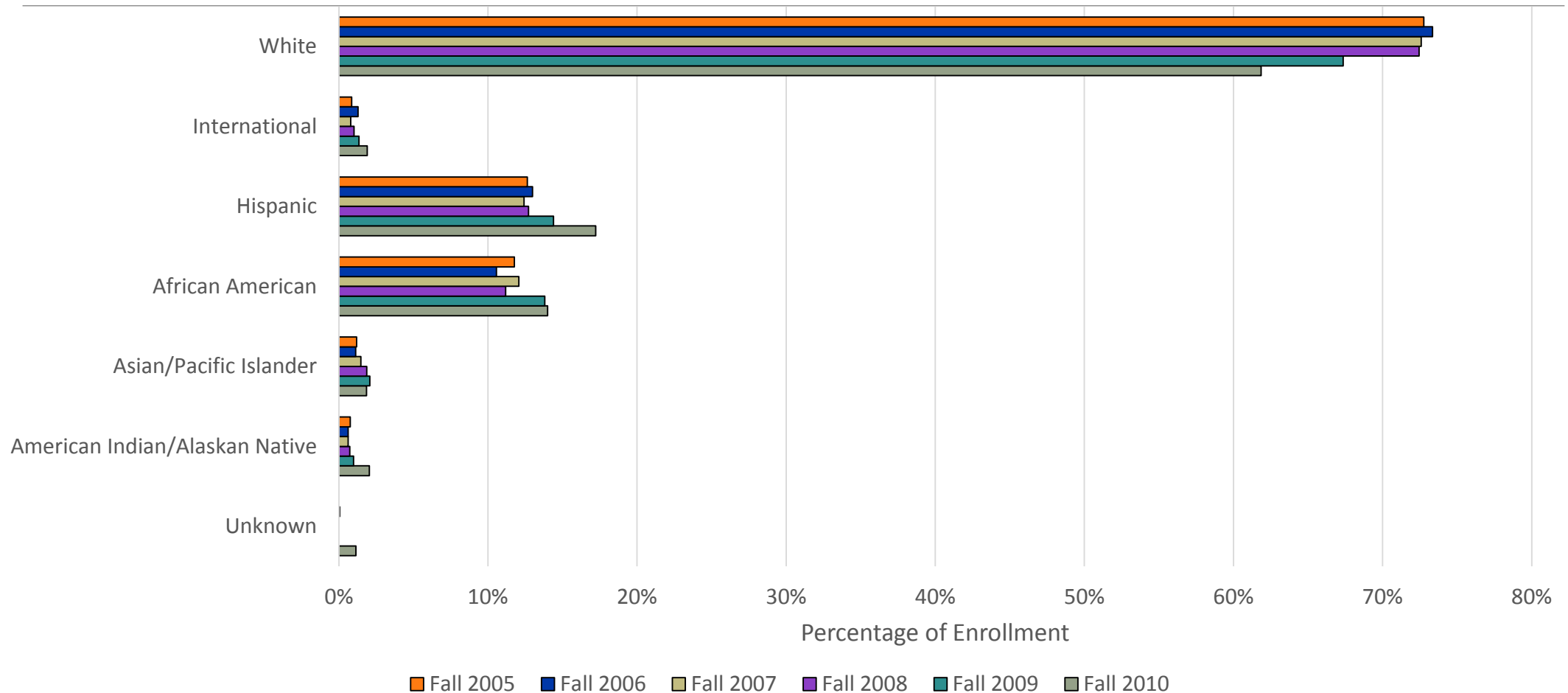
- Limit to only the incoming data variables.
- Change developmental education classification.
- Instead of institution type, consider number of institutions.
- Change the comparison group from the default selection.

Transfer Student Background Demographics

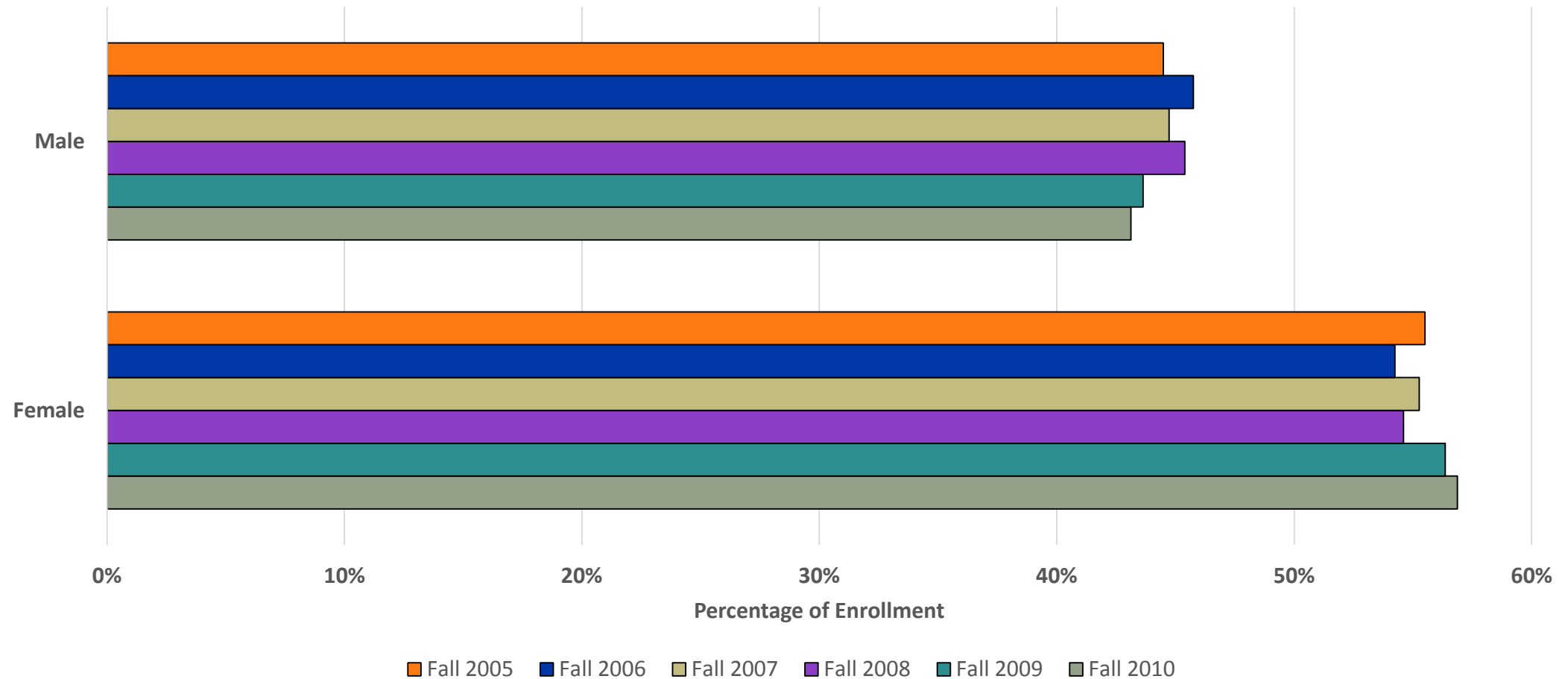


Transfer Student Study

Demographics: Ethnicity

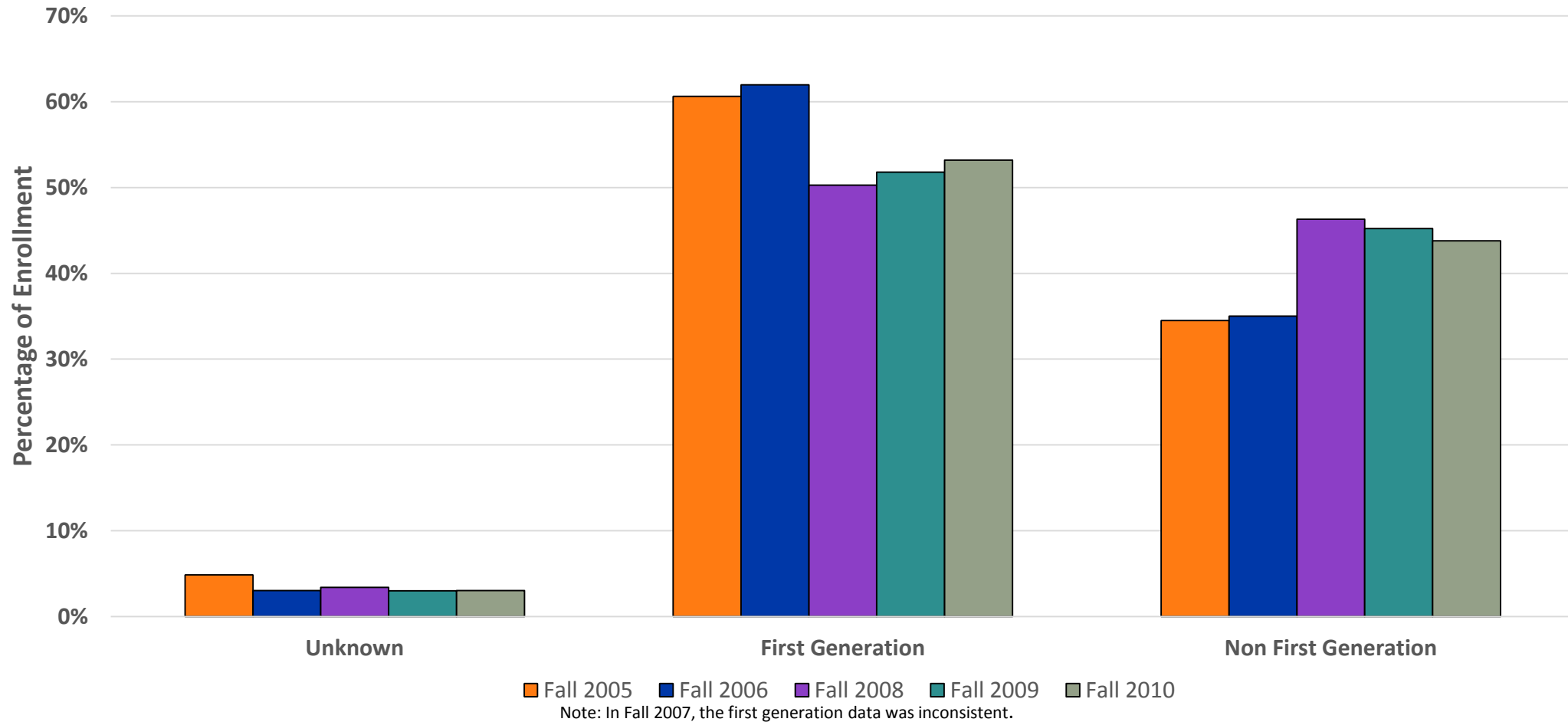


Transfer Student Study Demographics: Gender



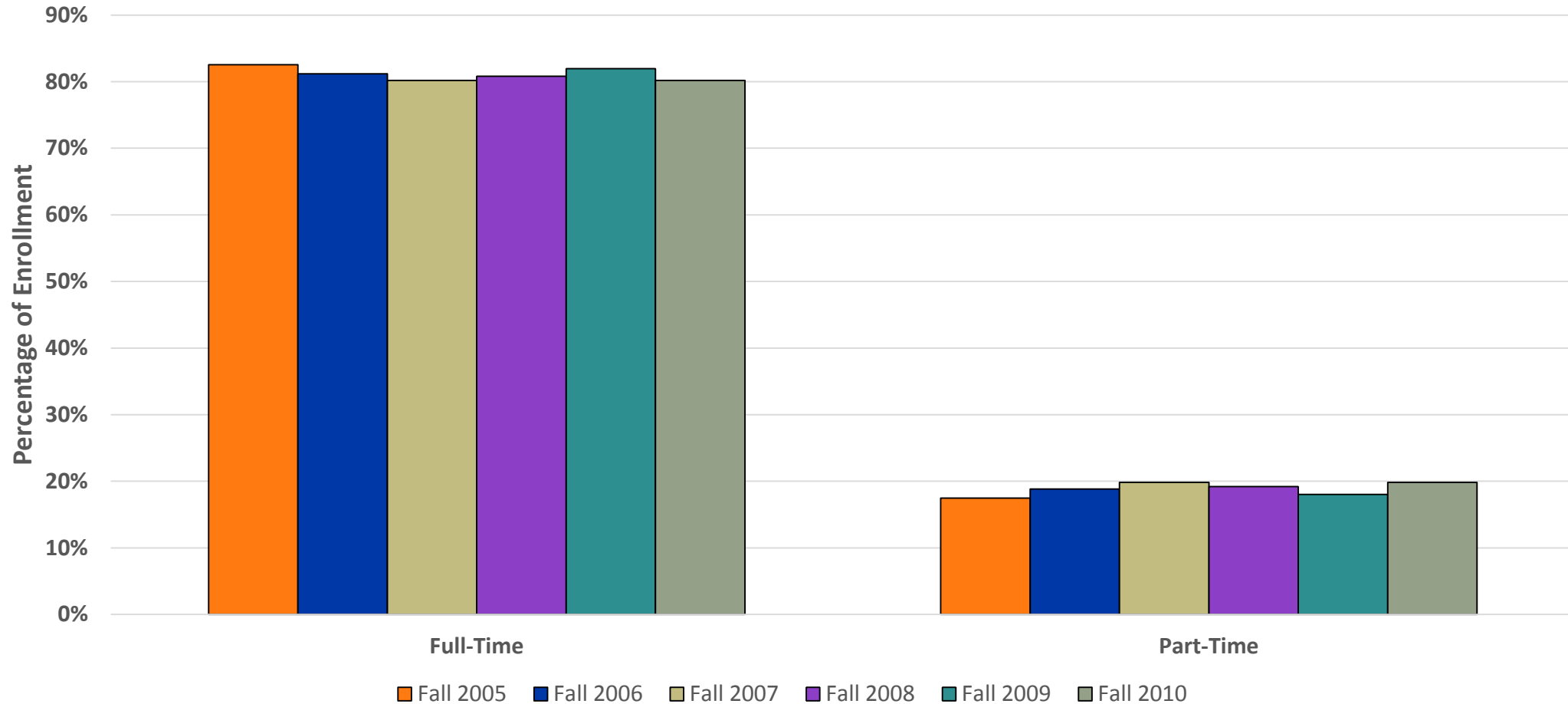
Transfer Student Study

Demographics: First Generation Status

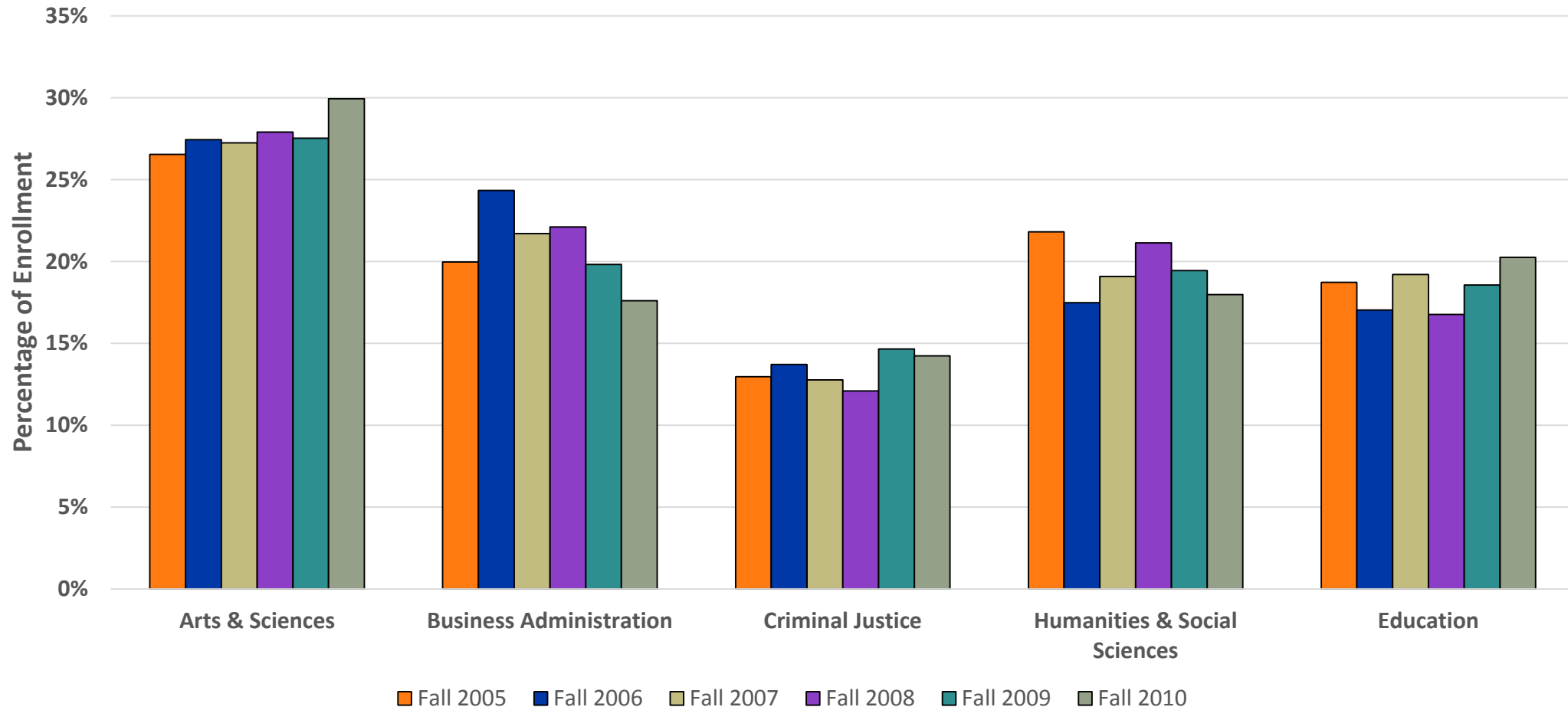


Transfer Student Study

Demographics: Academic Course Load



Transfer Student Study Demographics: College



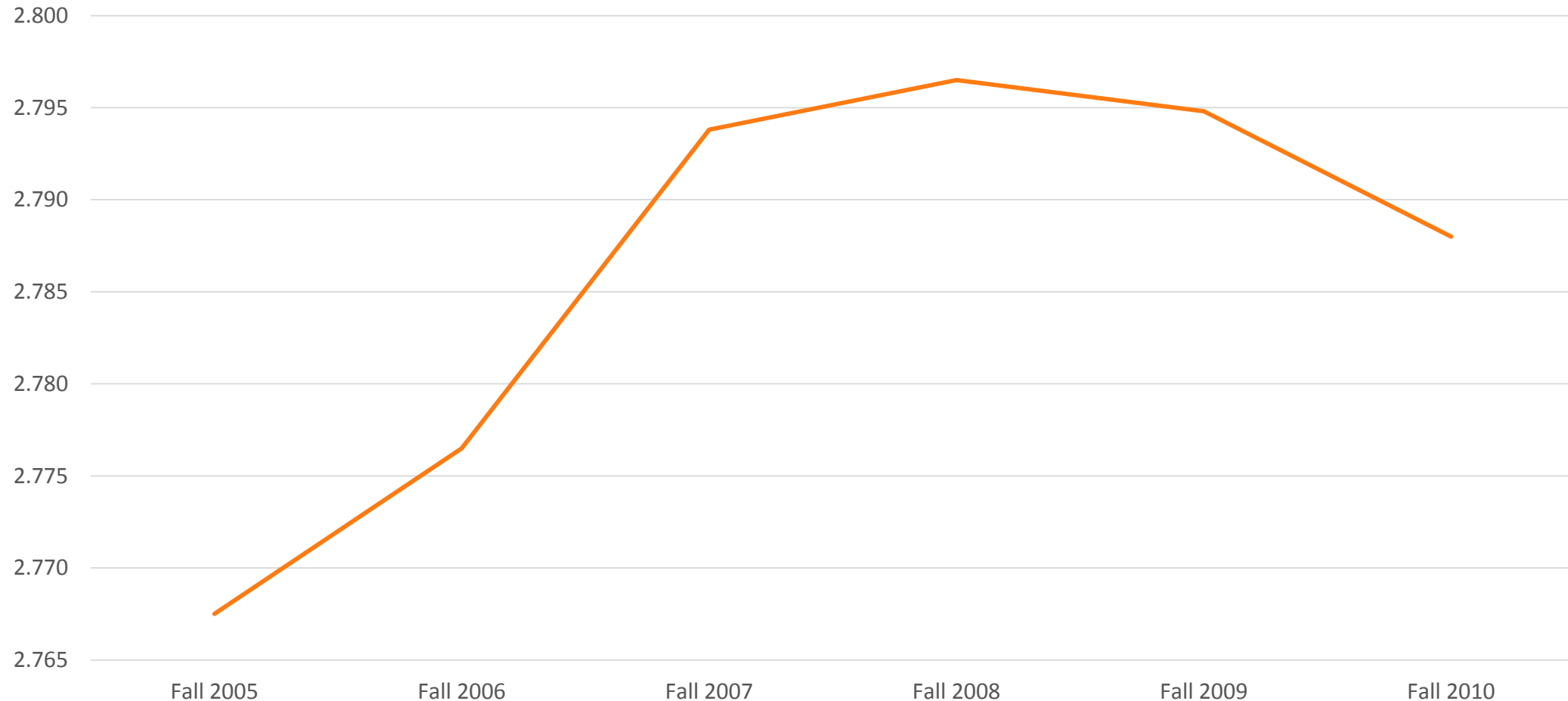
Transfer Student Study

Demographics: Starting Age

- The average starting age from Fall 2005 through Fall 2010 for SHSU First Time Transfer students is 23.
- The median starting age from Fall 2005 through Fall 2010 for SHSU First Time Transfer students is 21.

Transfer Student Study

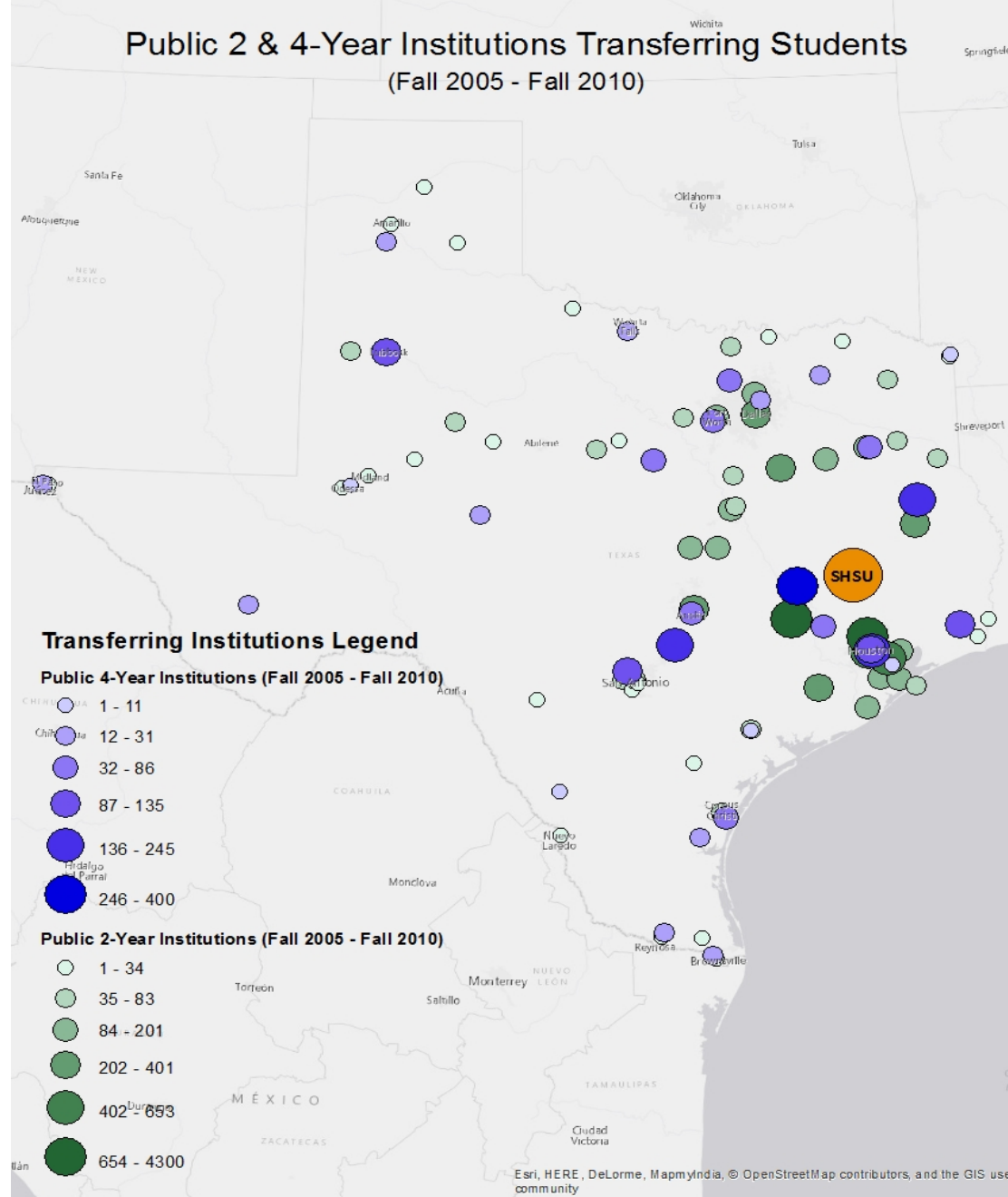
Demographics: Average Transfer GPA



Transfer Institution Maps

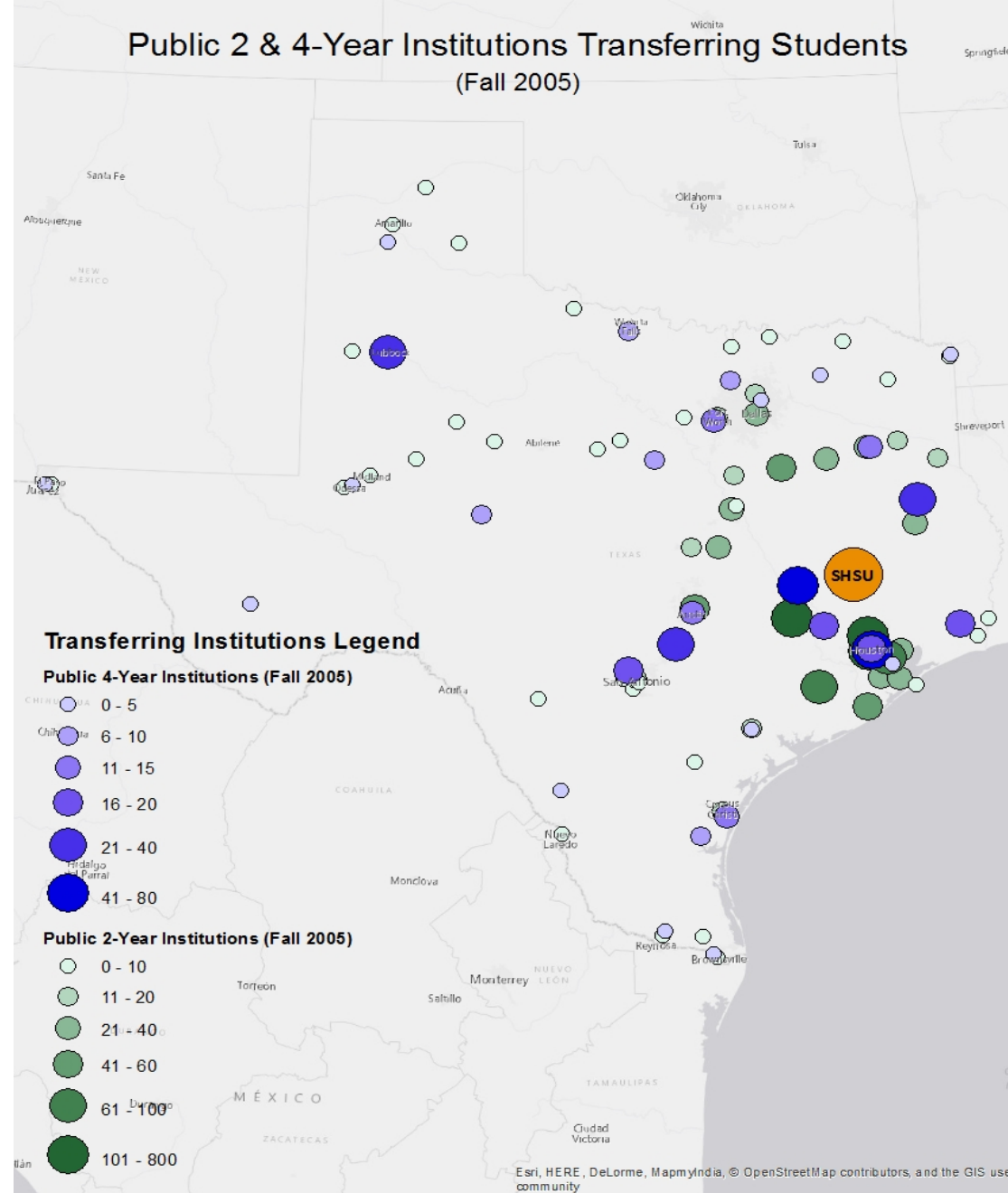


Public 2 & 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



Top 2-Year Public Institutions Transferring Students:

- Blinn College
- Lone Star College System District
- Houston Community College System
- San Jacinto Community College Central Campus

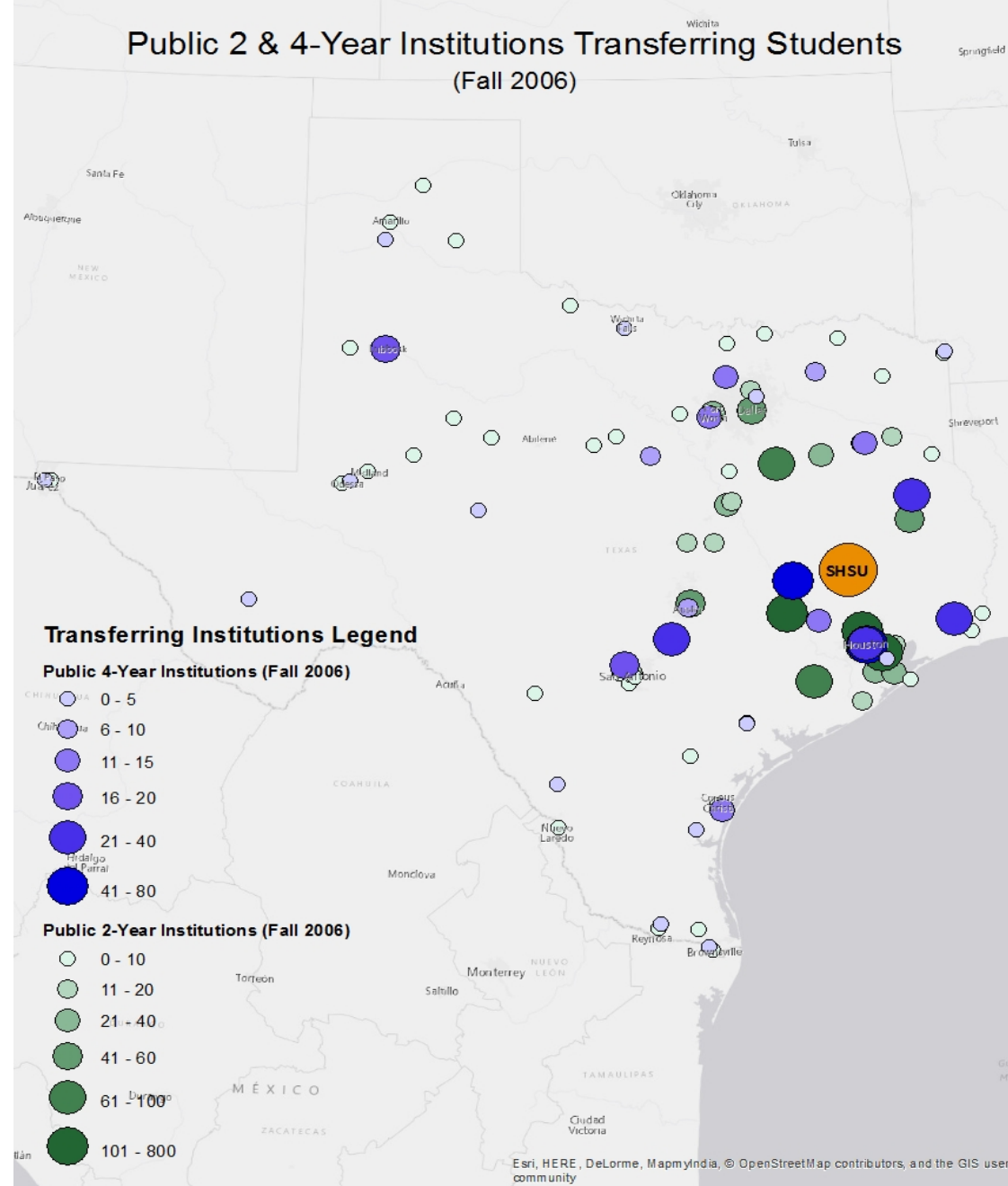


Top 4-Year Public Institutions Transferring Students:

- Texas A&M University
- Stephen F. Austin State University
- Texas State University
- University of Houston

Top 2-Year Public Institutions Transferring Students:

- Blinn College
- Lone Star College System District
- Houston Community College System
- San Jacinto Community College Central Campus
- Wharton County Junior College

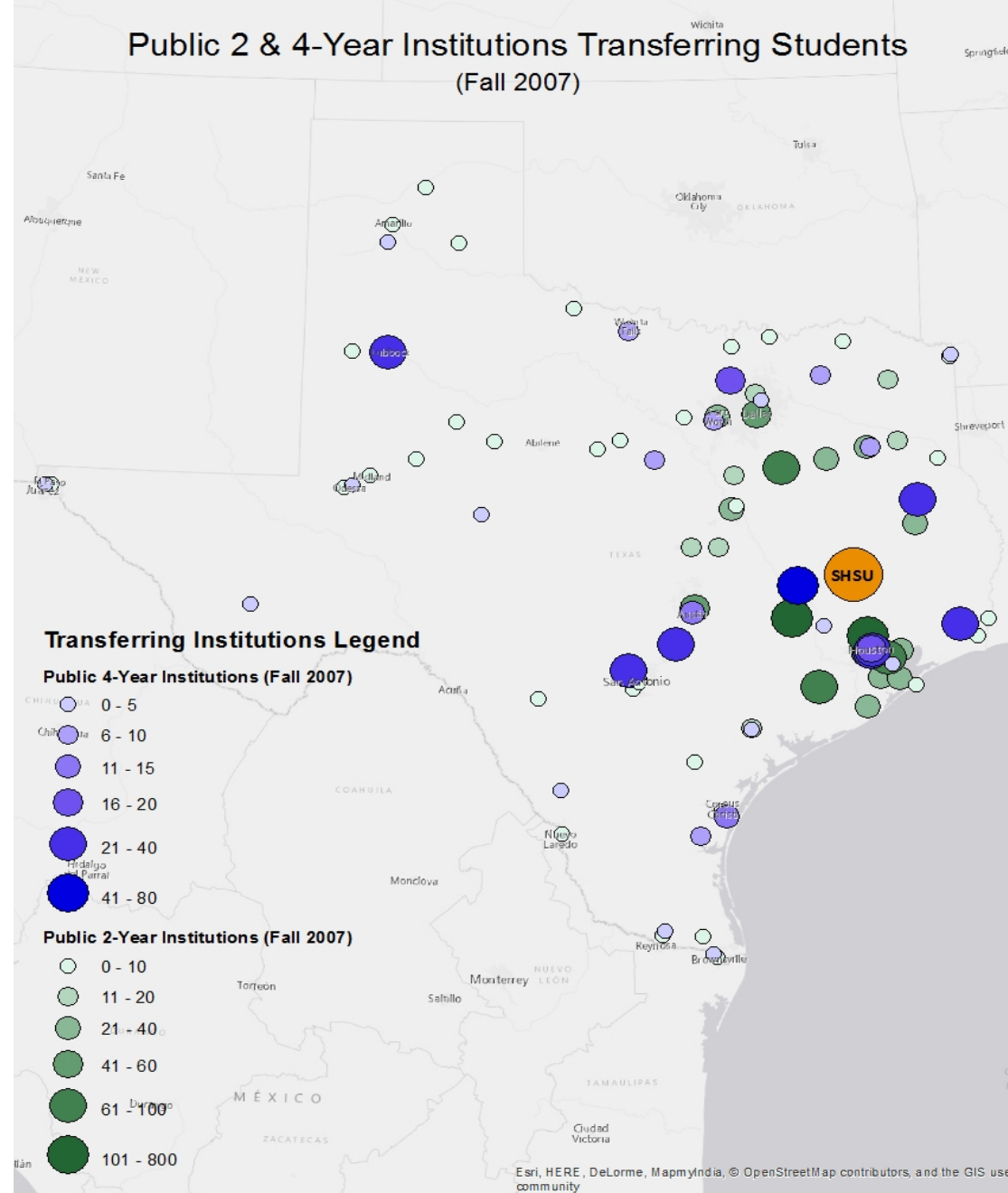


Top 4-Year Public Institutions Transferring Students:

- Texas A&M University
- Stephen F. Austin State University
- Texas State University
- University of Houston
- Texas Tech University
- Lamar University
- University of Houston-Downtown

Top 2-Year Public Institutions Transferring Students:

- Blinn College
- Lone Star College System District
- Houston Community College System
- San Jacinto Community College Central Campus
- Wharton County Junior College
- Navarro College

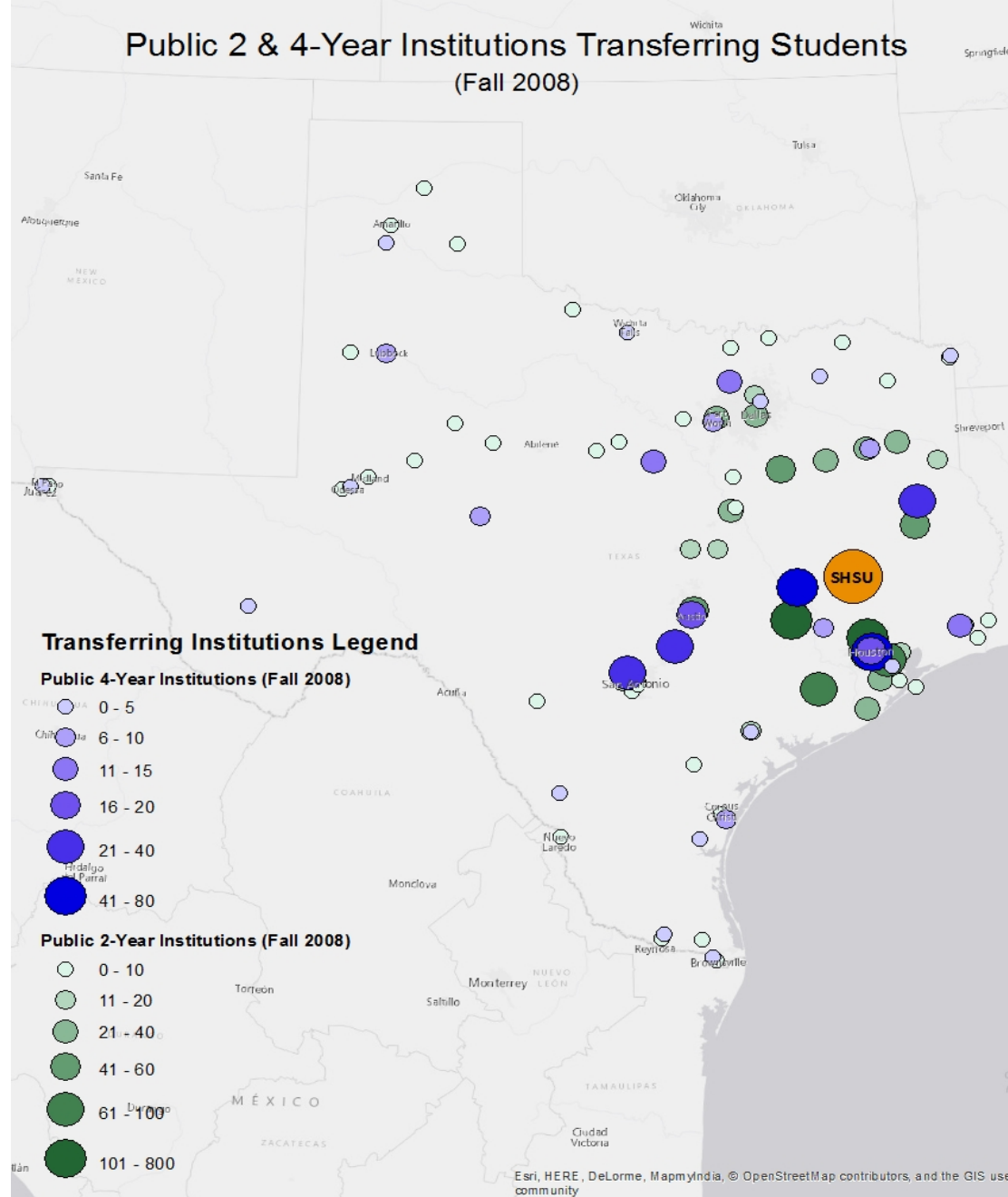


Top 4-Year Public Institutions Transferring Students:

- Texas A&M University
- Stephen F. Austin State University
- Texas State University
- University of Houston
- The University of Texas at San Antonio
- Texas Tech University
- Lamar University
- Texas Southern University
- University of North Texas

Top 2-Year Public Institutions Transferring Students:

- Blinn College
- Lone Star College System District
- Houston Community College System
- San Jacinto Community College Central Campus

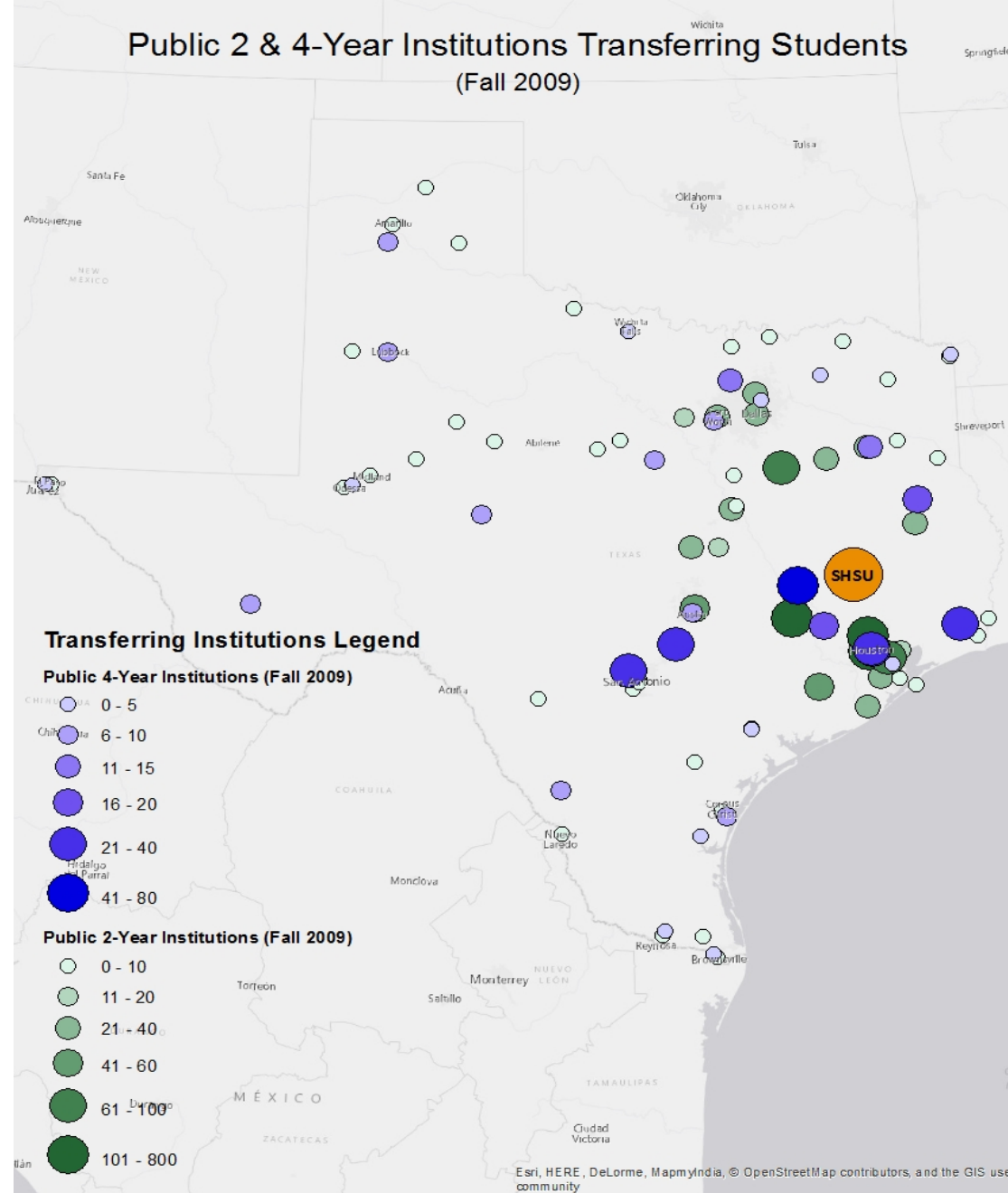


Top 4-Year Public Institutions Transferring Students:

- Texas A&M University
- Stephen F. Austin State University
- Texas State University
- University of Houston
- The University of Texas at San Antonio

Top 2-Year Public Institutions Transferring Students:

- Blinn College
- Lone Star College System District
- Houston Community College System

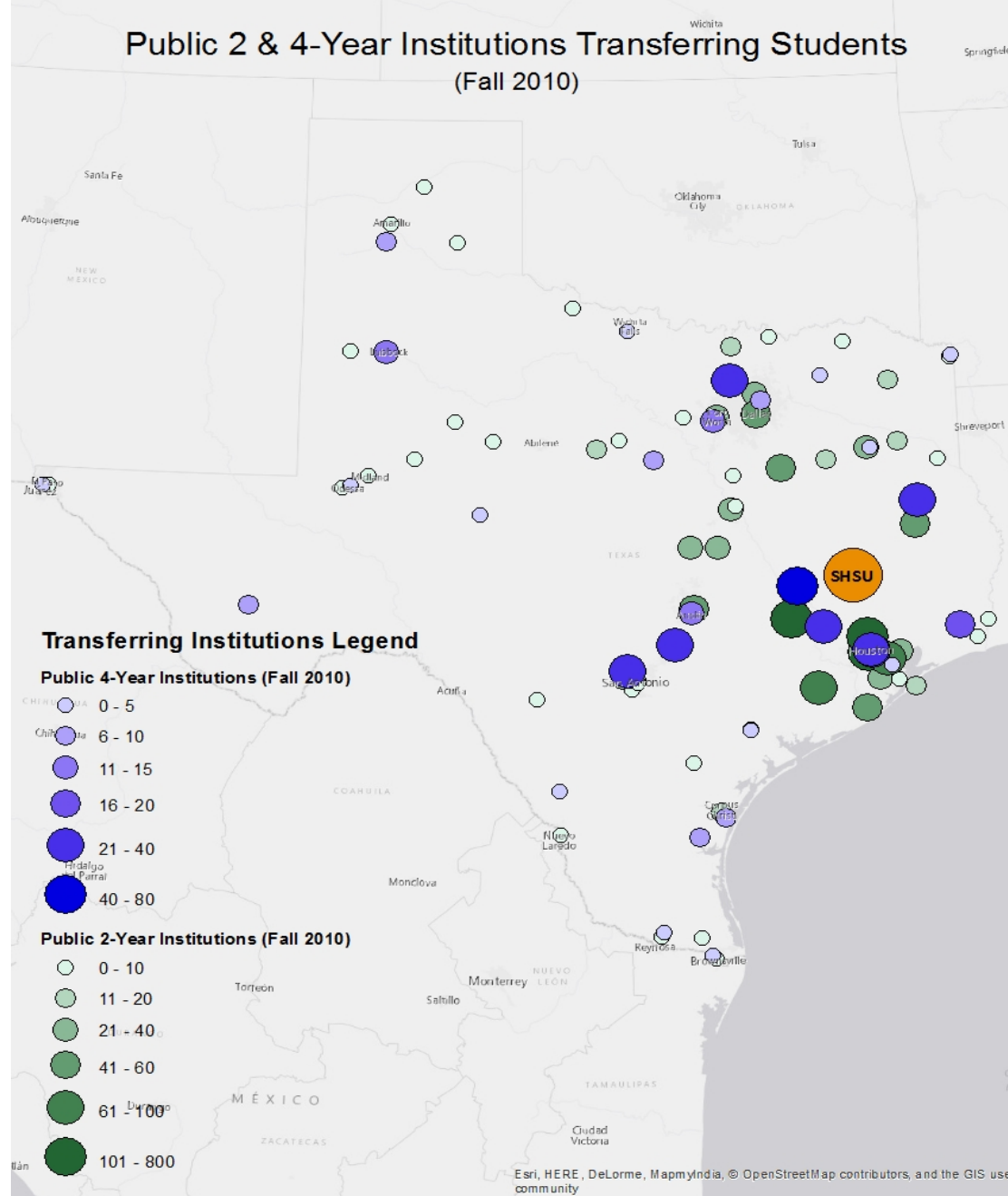


Top 4-Year Public Institutions Transferring Students:

- Texas A&M University
- Stephen F. Austin State University
- Texas State University
- University of Houston
- The University of Texas at San Antonio
- Lamar University
- Texas Southern University
- Prairie View A&M University

Top 2-Year Public Institutions Transferring Students:

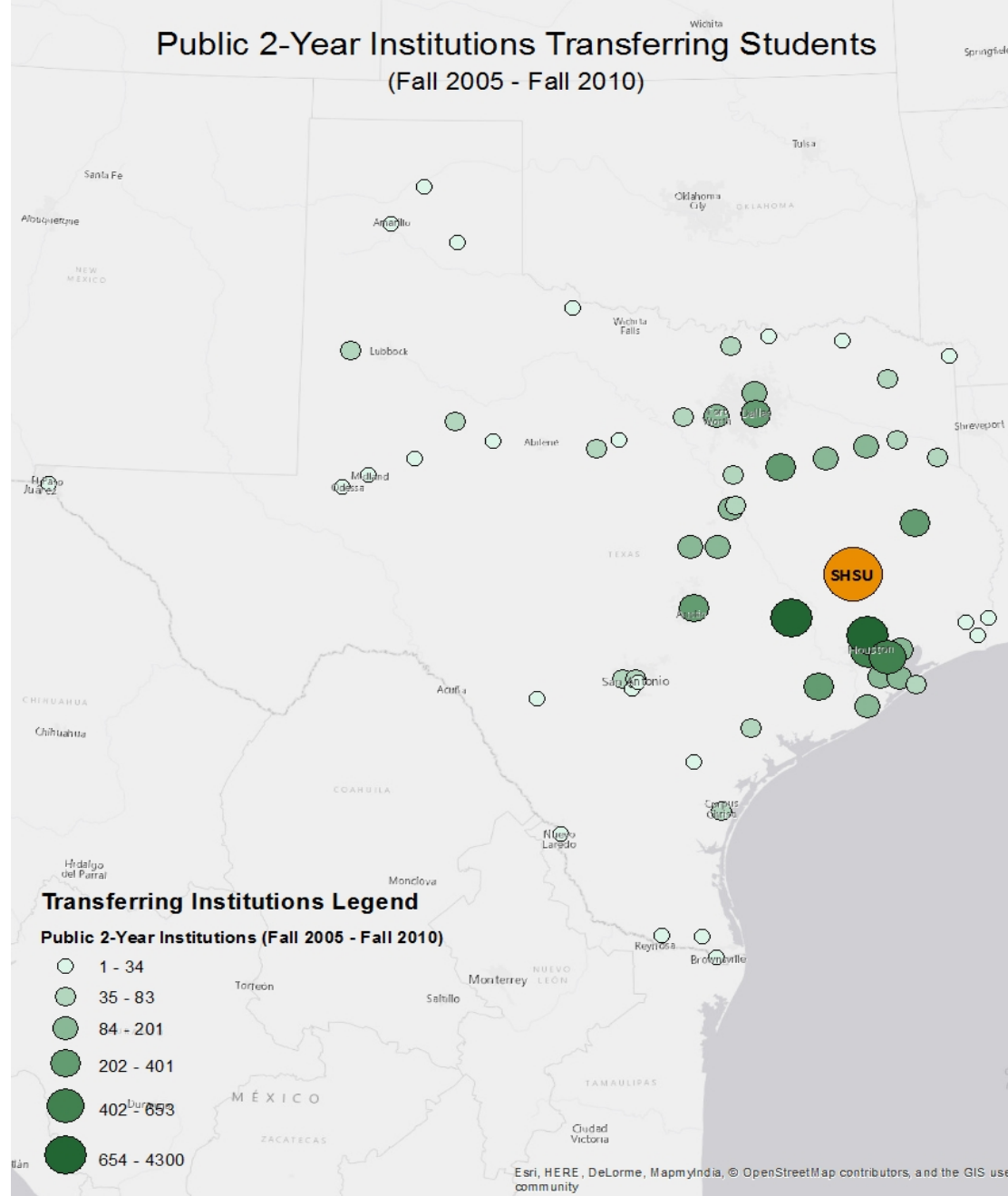
- Blinn College
- Lone Star College System District
- Houston Community College System
- San Jacinto Community College Central Campus



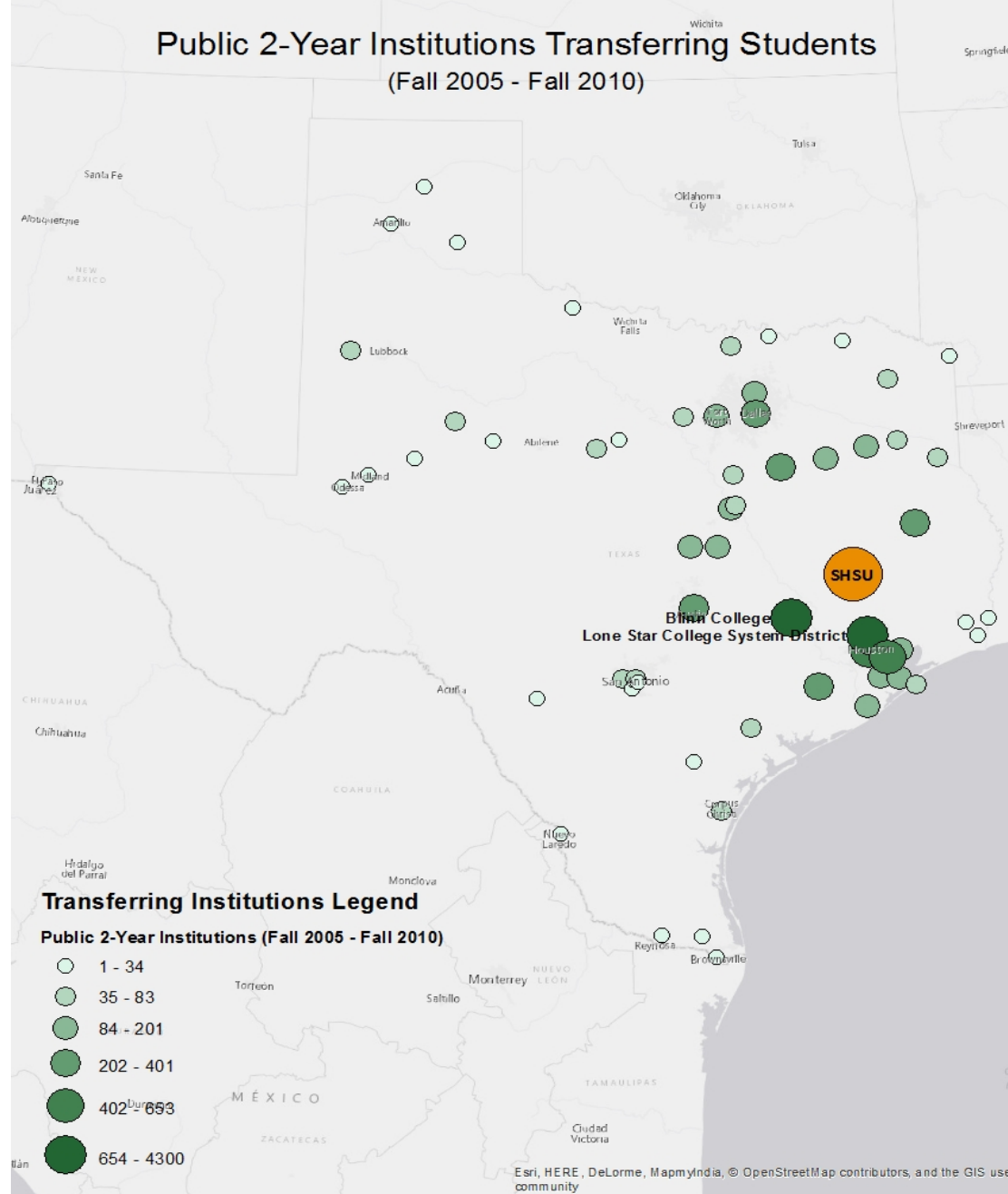
Top 4-Year Public Institutions Transferring Students:

- Texas A&M University
- Stephen F. Austin State University
- Texas State University
- University of Houston

Public 2-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



Public 2-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



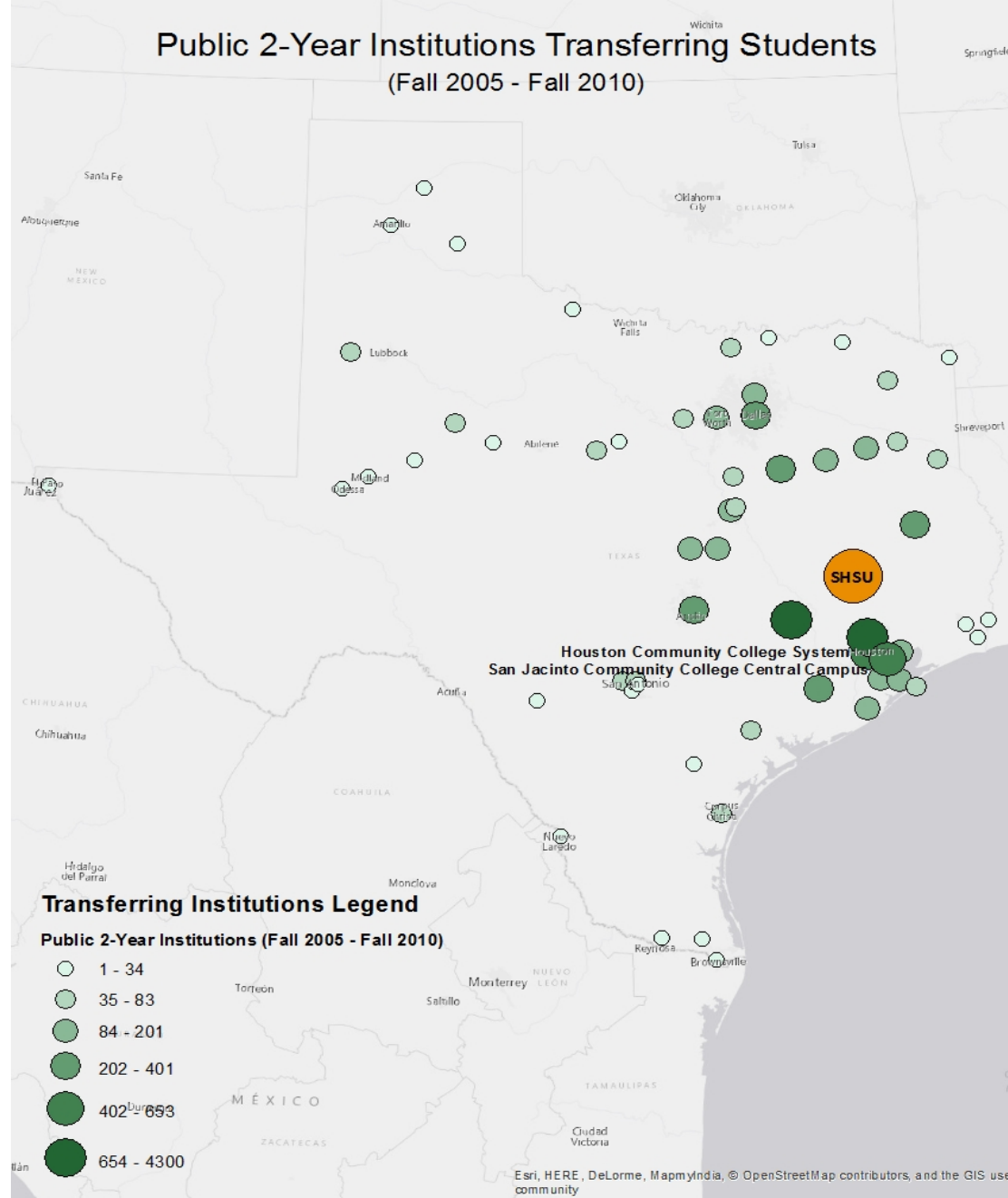
Transferring Institutions Legend

Public 2-Year Institutions (Fall 2005 - Fall 2010)

- 1 - 34
- 35 - 83
- 84 - 201
- 202 - 401
- 402 - 653
- 654 - 4300



Public 2-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



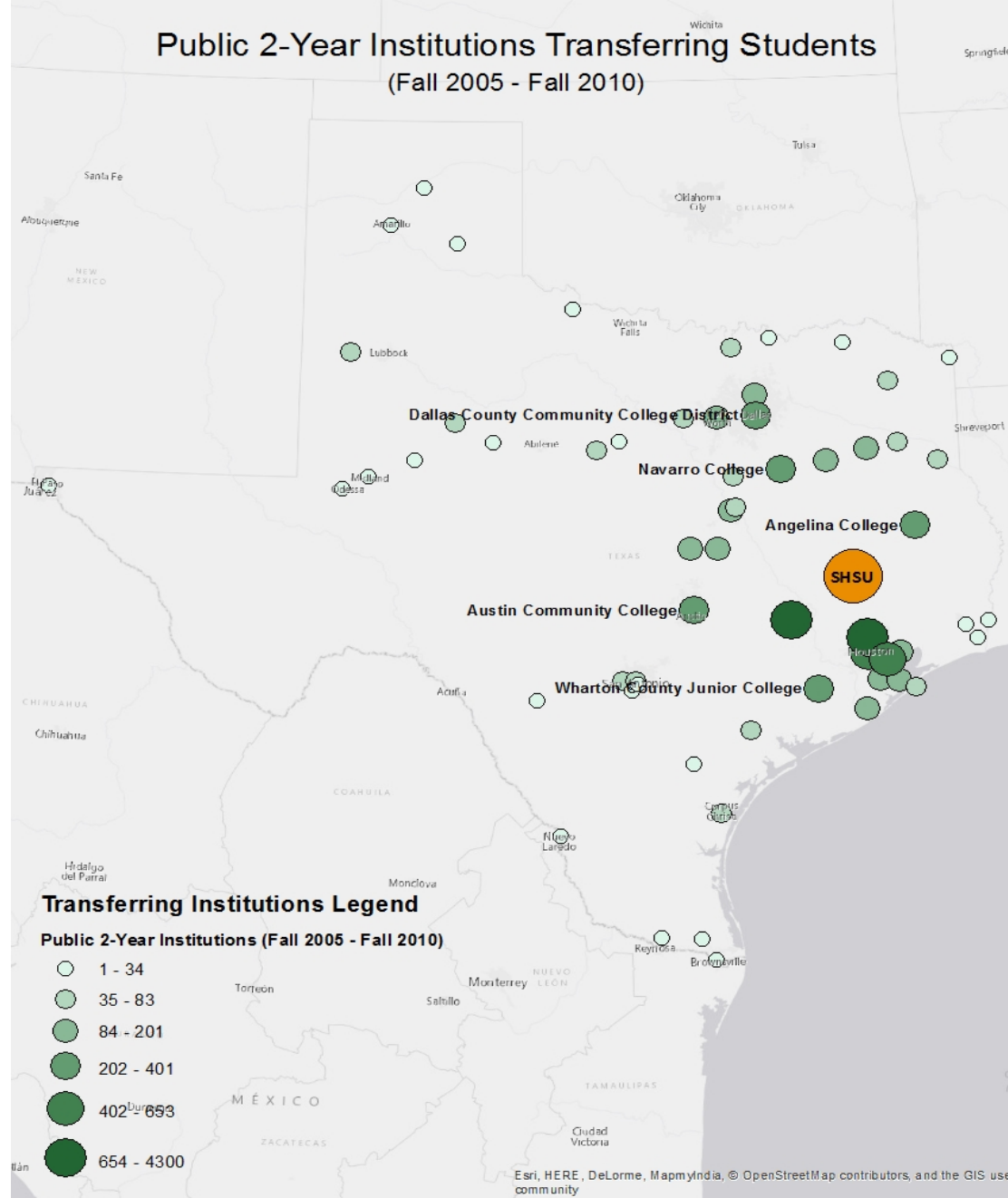
Transferring Institutions Legend

Public 2-Year Institutions (Fall 2005 - Fall 2010)

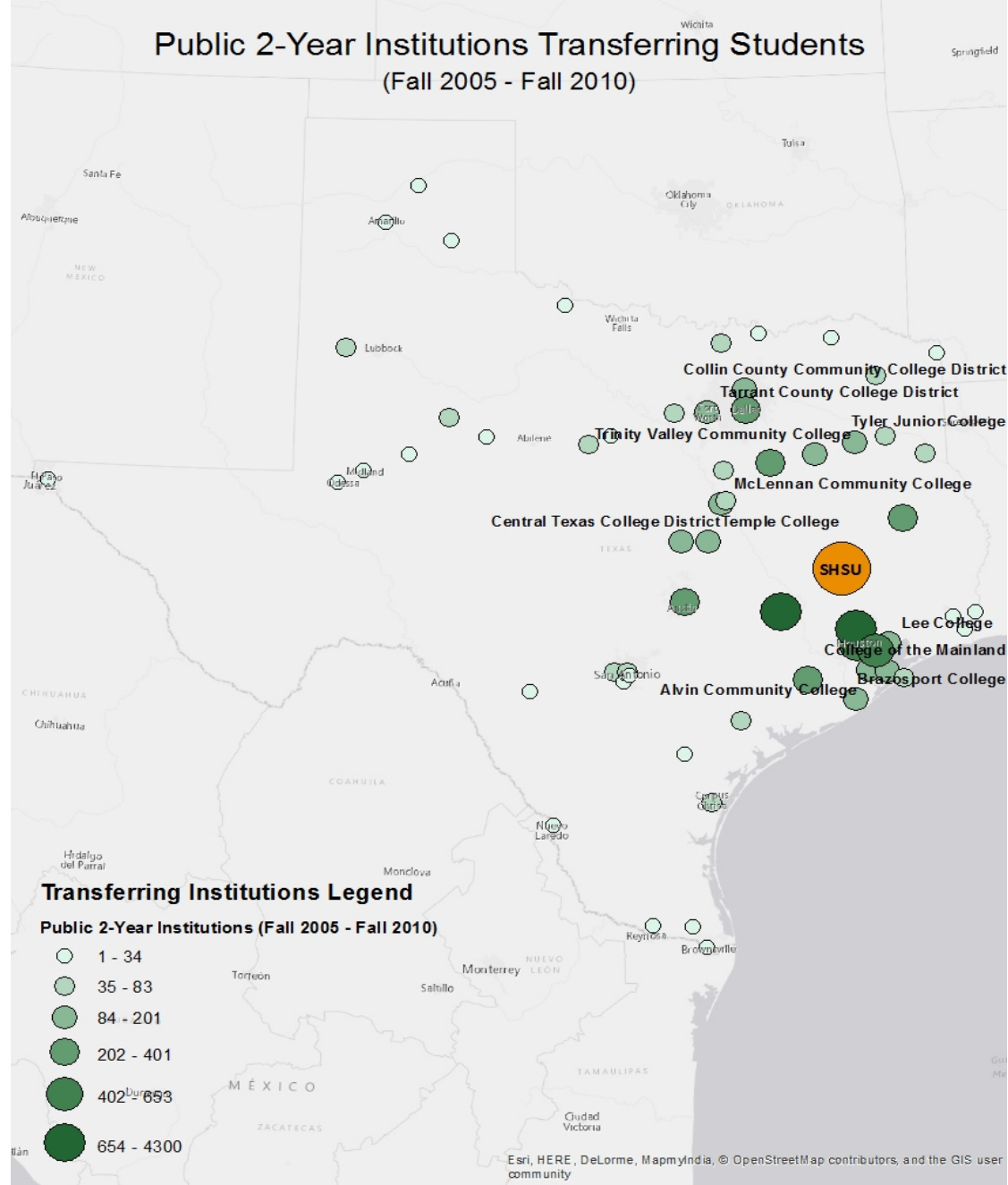
- 1 - 34
- 35 - 83
- 84 - 201
- 202 - 401
- 402 - 653
- 654 - 4300



Public 2-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



Public 2-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



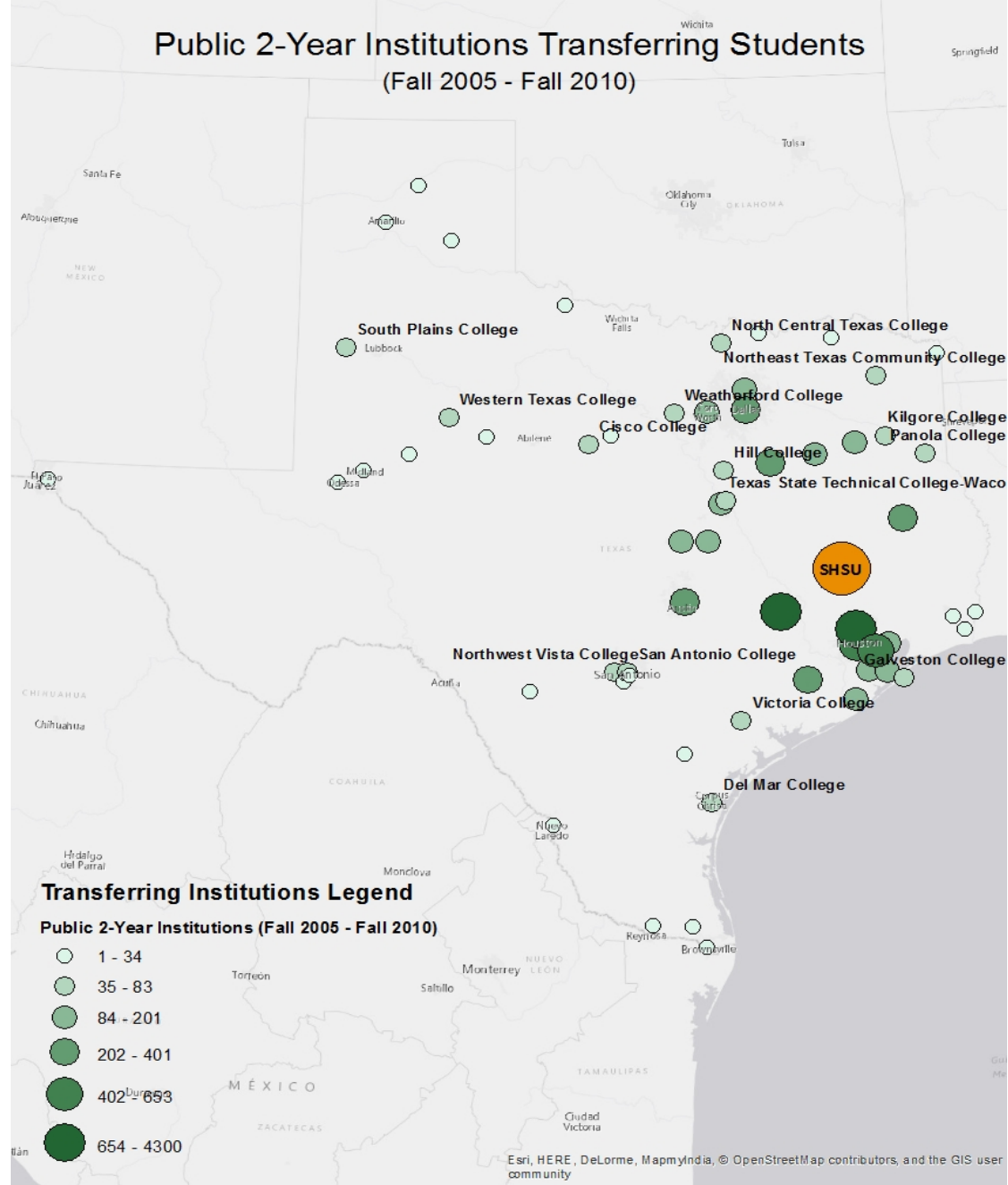
Transferring Institutions Legend

Public 2-Year Institutions (Fall 2005 - Fall 2010)

- 1 - 34
- 35 - 83
- 84 - 201
- 202 - 401
- 402 - 653
- 654 - 4300



Public 2-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



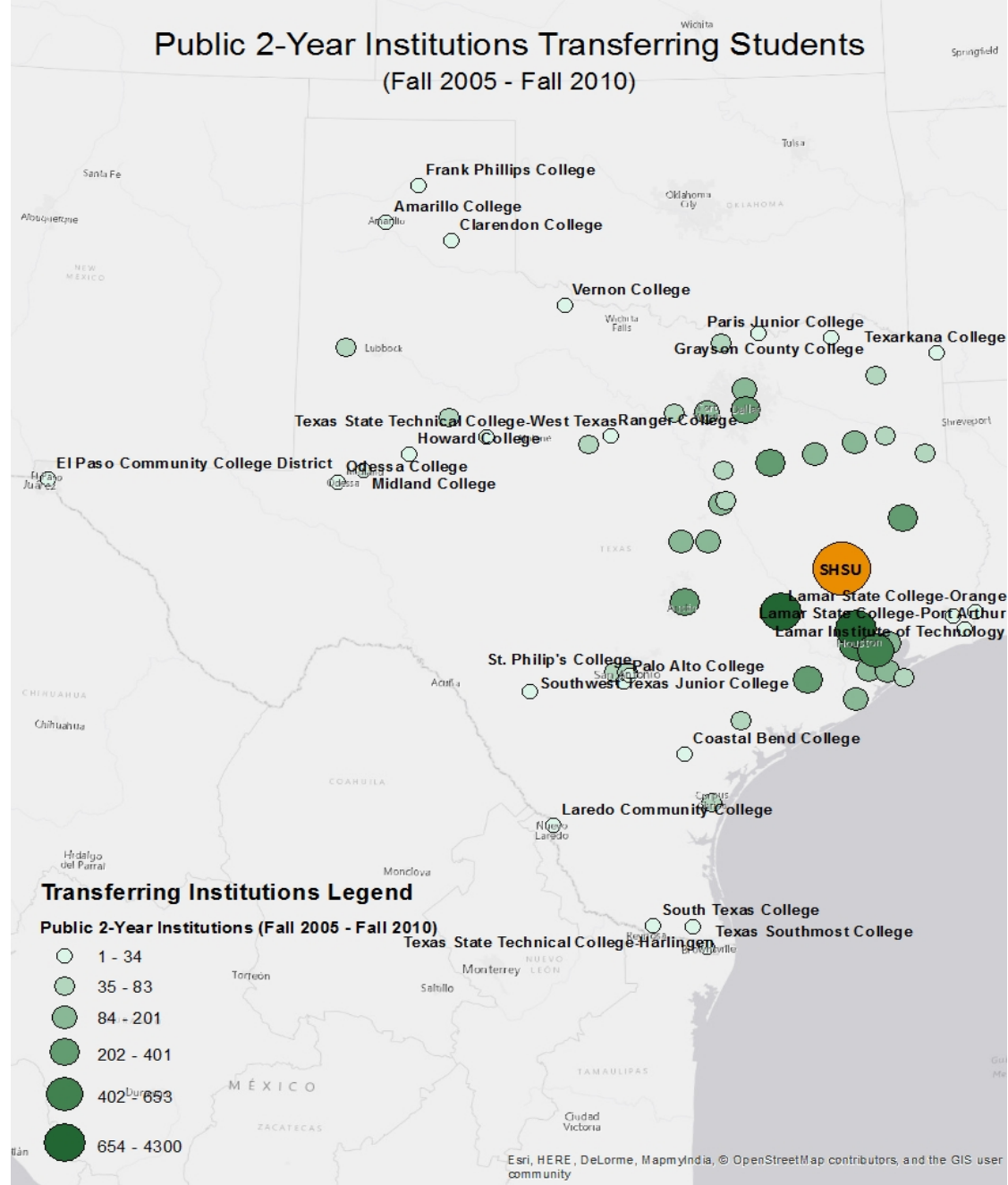
Transferring Institutions Legend

Public 2-Year Institutions (Fall 2005 - Fall 2010)

- 1 - 34
- 35 - 83
- 84 - 201
- 202 - 401
- 402 - 653
- 654 - 4300



Public 2-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



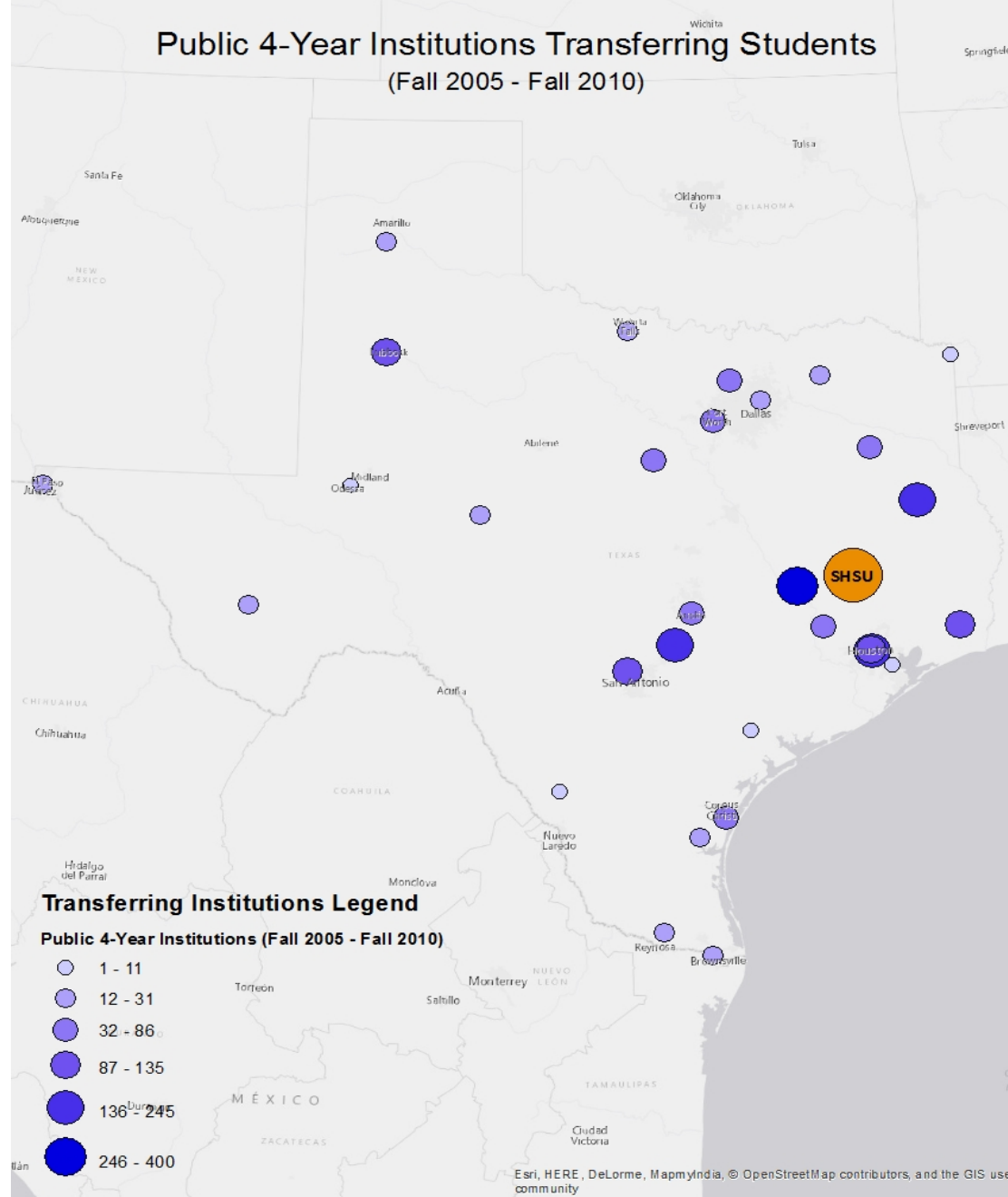
Transferring Institutions Legend

Public 2-Year Institutions (Fall 2005 - Fall 2010)

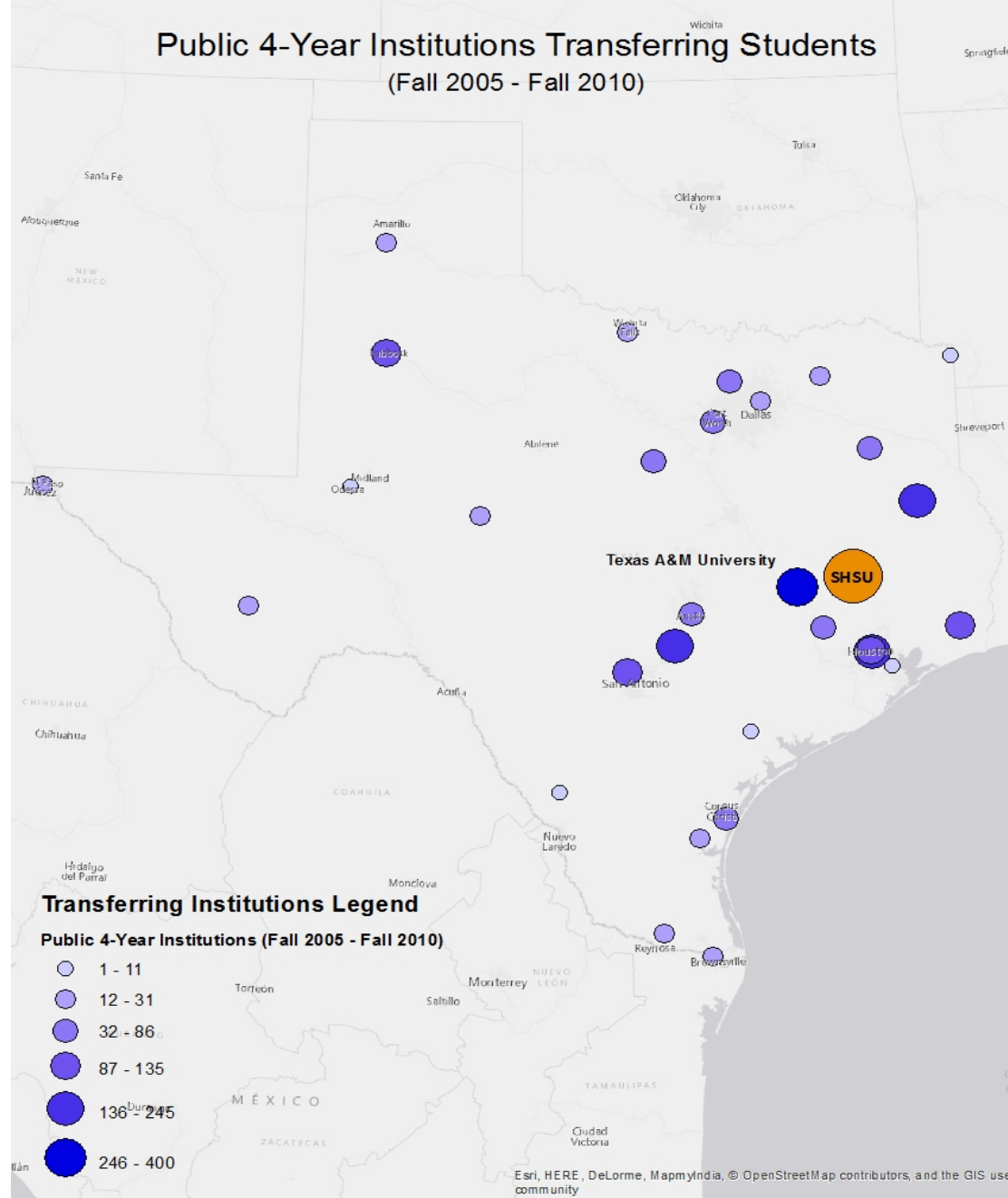
- 1 - 34
- 35 - 83
- 84 - 201
- 202 - 401
- 402 - 653
- 654 - 4300



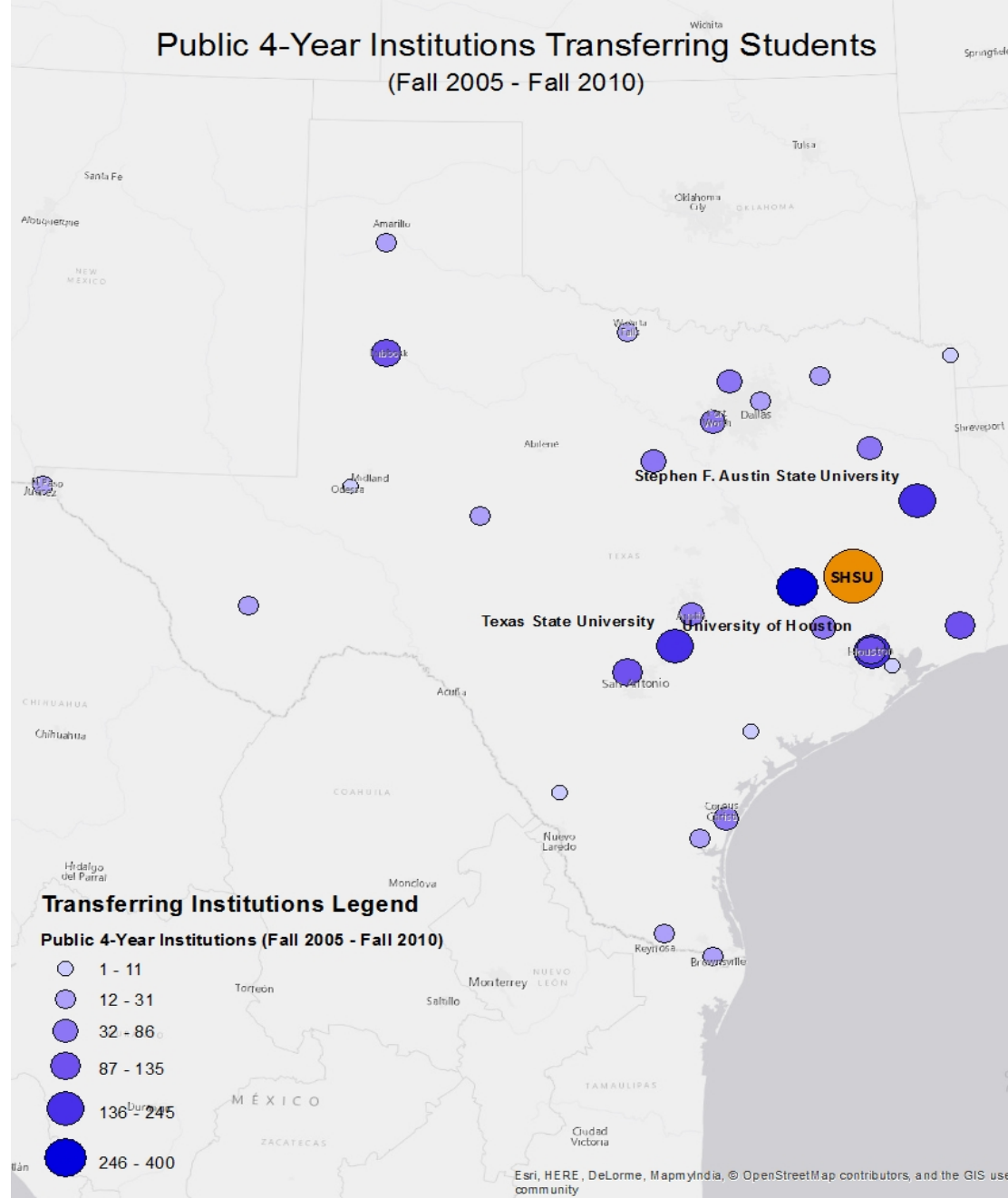
Public 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



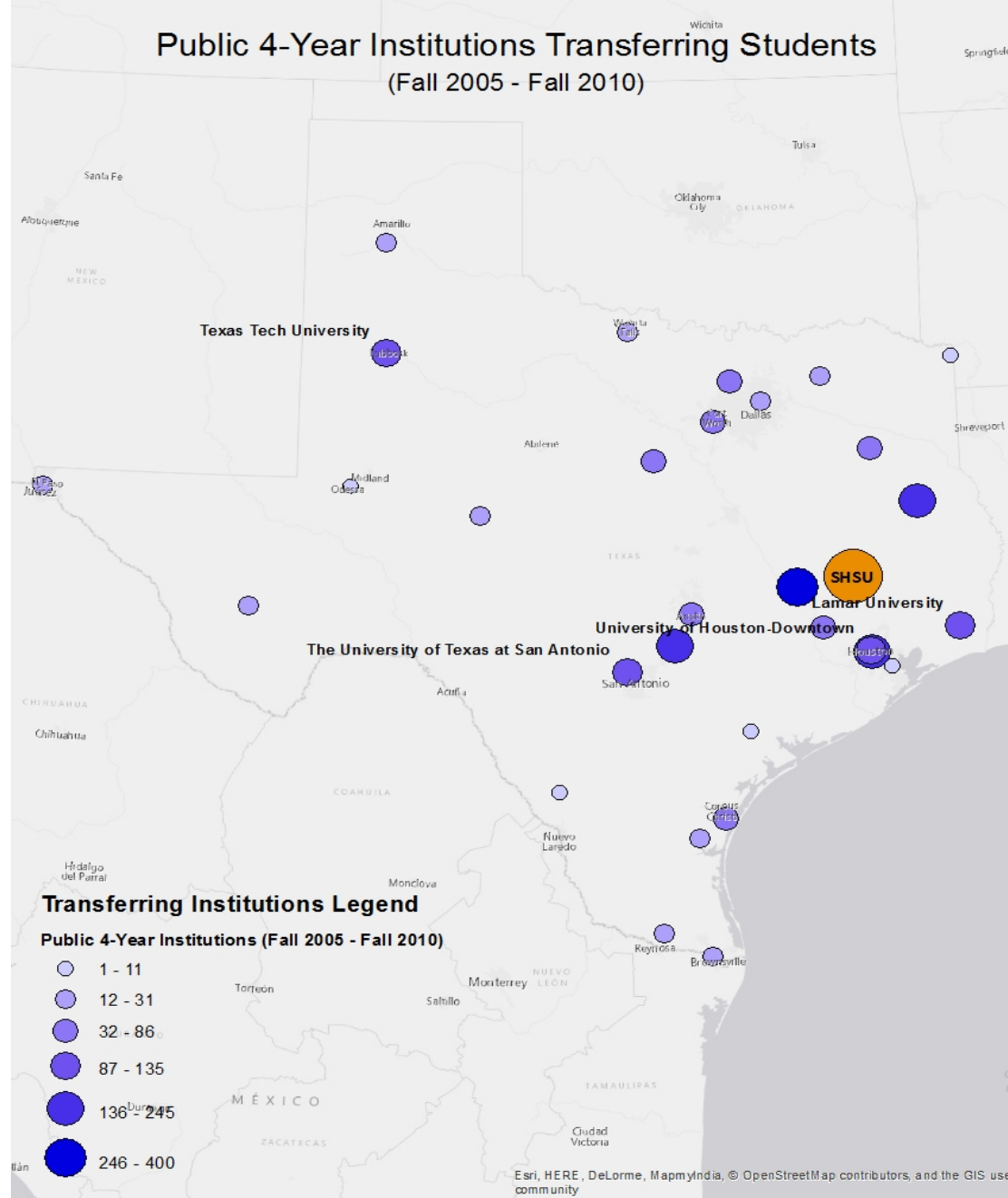
Public 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



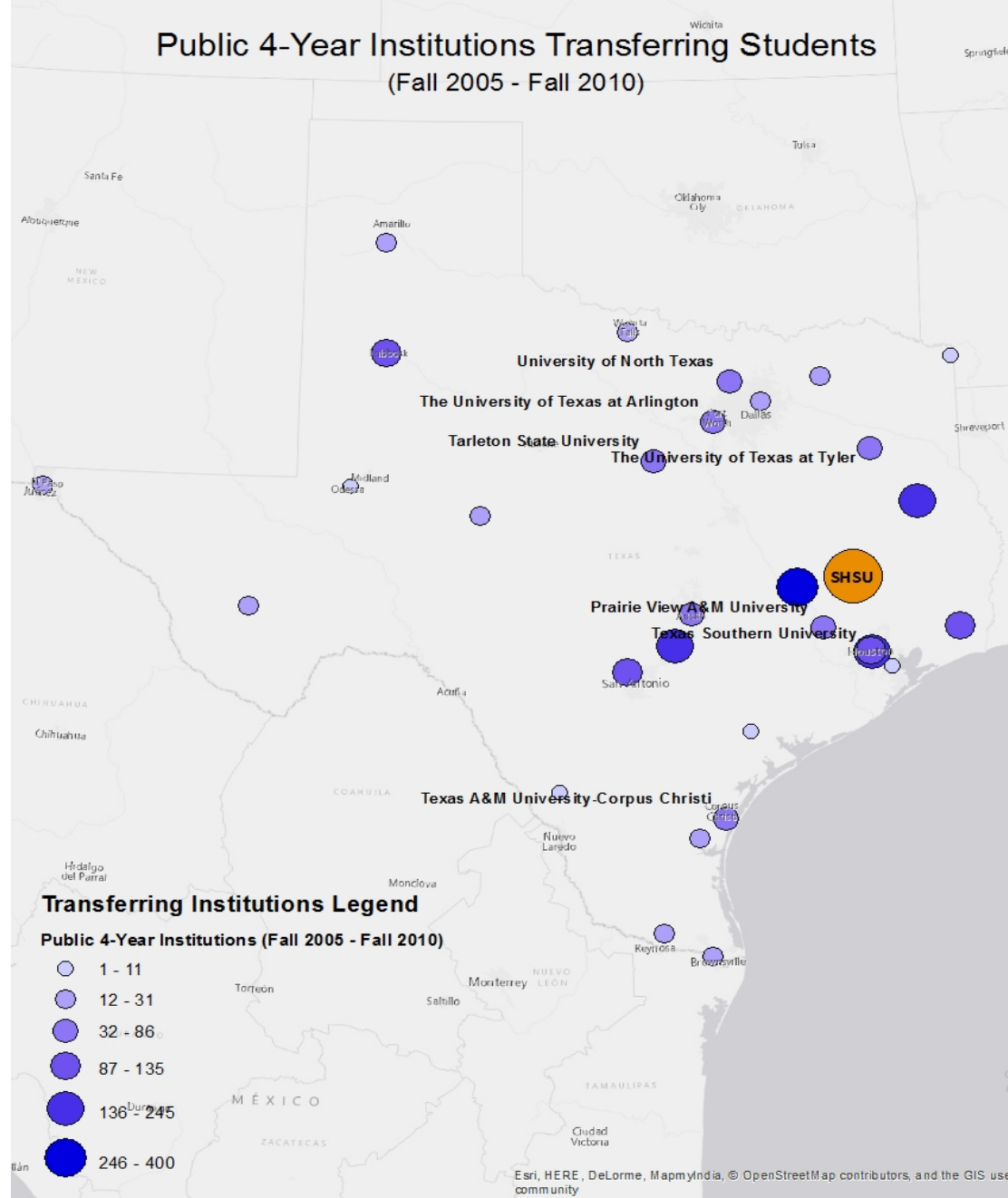
Public 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



Public 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



Public 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



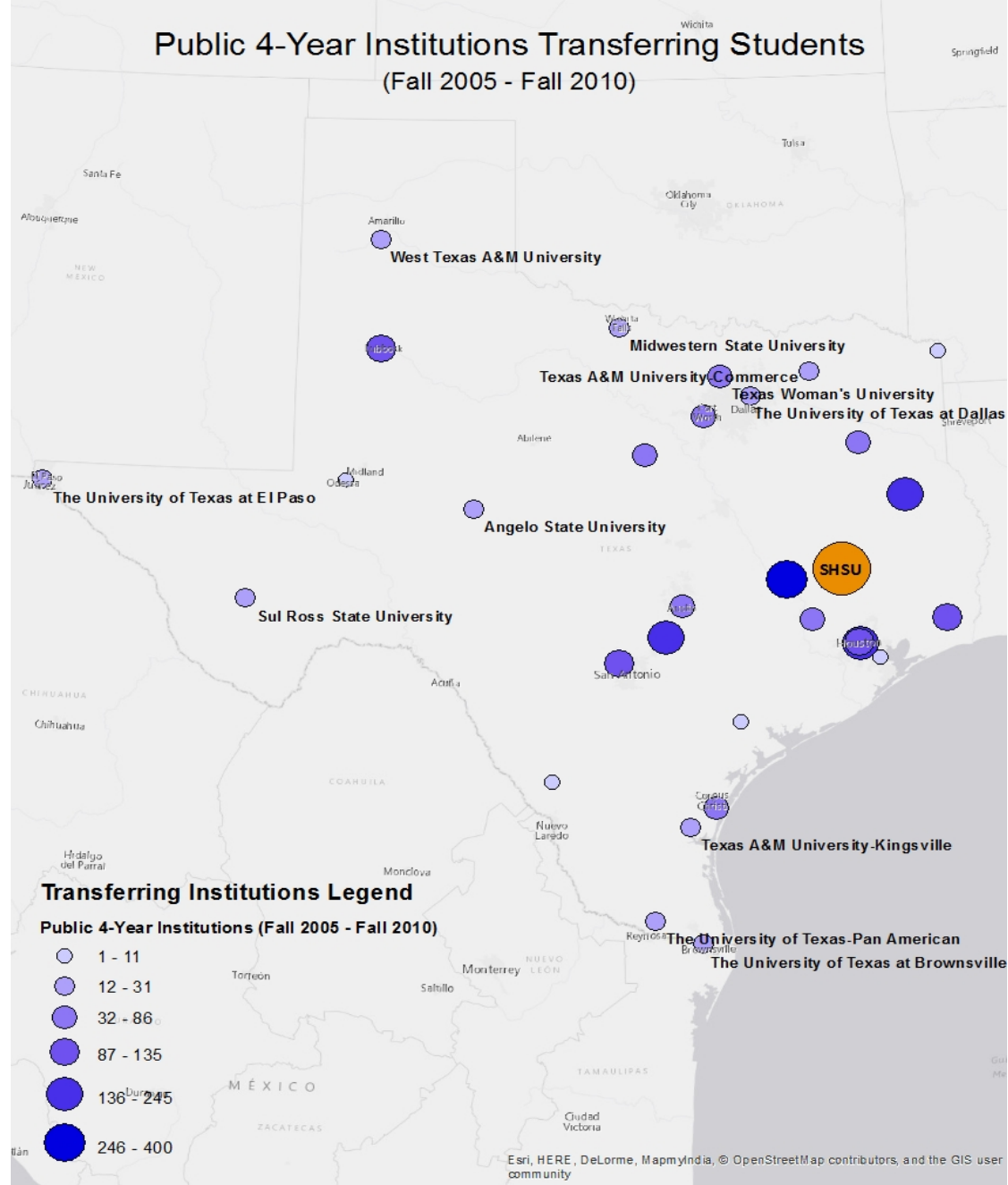
Transferring Institutions Legend

Public 4-Year Institutions (Fall 2005 - Fall 2010)

- 1 - 11
- 12 - 31
- 32 - 86
- 87 - 135
- 136 - 245
- 246 - 400



Public 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



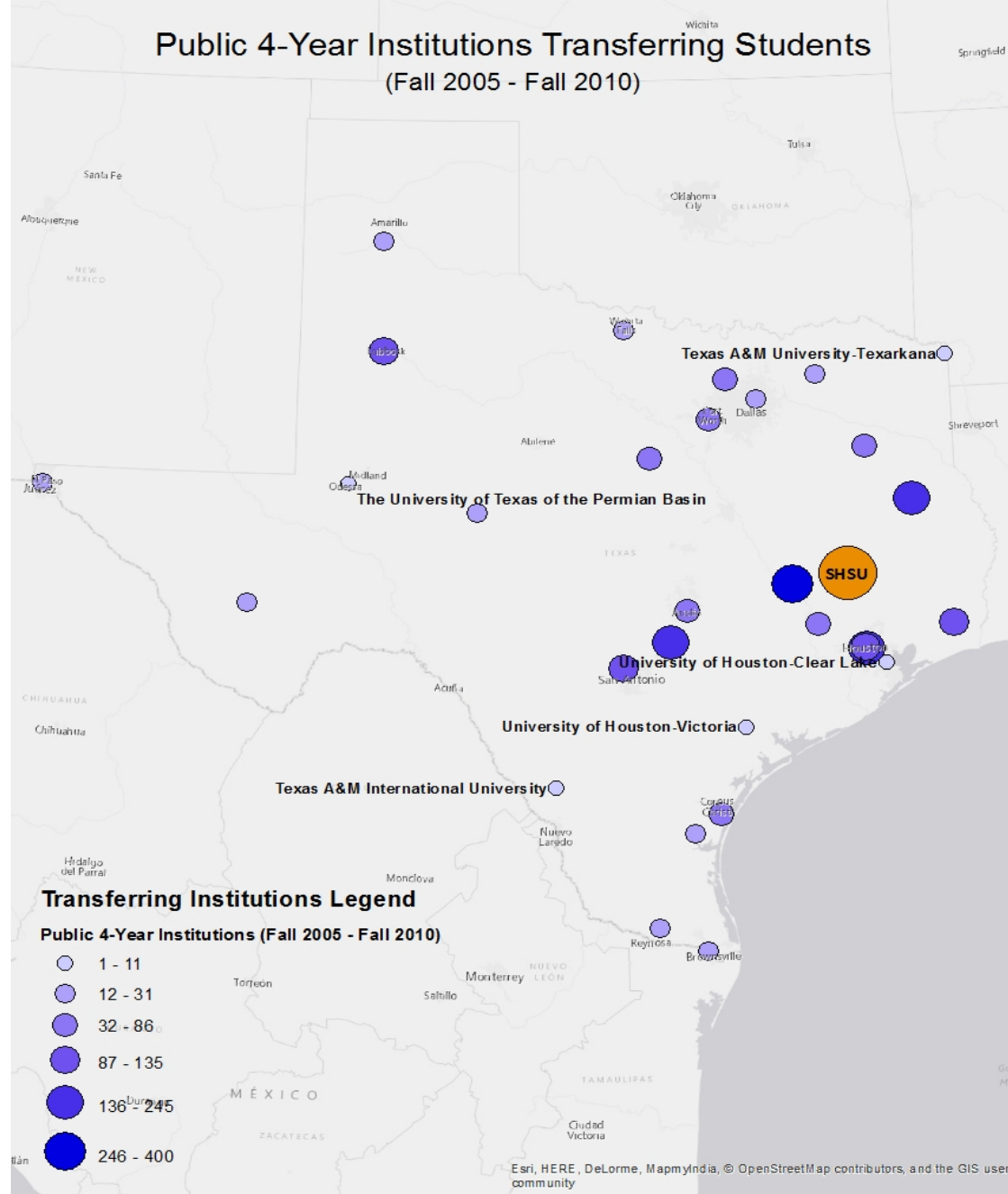
Transferring Institutions Legend

Public 4-Year Institutions (Fall 2005 - Fall 2010)

- 1 - 11
- 12 - 31
- 32 - 86
- 87 - 135
- 136 - 245
- 246 - 400



Public 4-Year Institutions Transferring Students (Fall 2005 - Fall 2010)



Transferring Institutions Legend

Public 4-Year Institutions (Fall 2005 - Fall 2010)

- 1 - 11
- 12 - 31
- 32 - 86
- 87 - 135
- 136 - 245
- 246 - 400



Transfer Student Analysis



Logistic Regression

Used to predict the presence or absence of an outcome based on values of a set of predictor variables.

When there are multiple independent variables the resulting model is:

$$\ln(y) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_m x_m + \epsilon$$

$$\beta_j \text{ for all } j = 0, 1, 2, \dots, m$$

Backward Elimination

- Considers the full model with all independent variables.
- Eliminates the least contributing variable, using the t or F statistics.
- The process is repeated until all the remaining variables have a significant p-value.
- When a variable has been dropped it can not be reentered into the model.

Likelihood Ratio

- The likelihood ratio test is a test of the sufficiency of a smaller model versus a more complex model.
- The null hypothesis of the test states that the smaller model provides as good a fit for the data as the larger model.
- If the null hypothesis is rejected, then the alternative, larger model provides a significant improvement over the smaller model.

Variables Used in Analysis

DEPENDENT VARIABLE

- 4-Year Graduation

Variables Used in Analysis

INDEPENDENT VARIABLES

- Ethnicity
- Gender
- Starting Age
- First-Generation
- Developmental Education
- Total Number of Institutions Transferred From
- Total Number of Credits Transferred
- Overall GPA from All Institutions Transferred
- Credits Transferred from Institution with the Most Credits
- GPA Transferred from Institution with the Most Credits
- Credits Transferred from Most Recent Institution
- GPA Transferred from Most Recent Institution

Variable Definition

First Generation – A student is considered a first generation student when neither parent has received a Bachelor's Degree or higher.



Variable Changes

Developmental Education – A student can be classified in one of the following four definitions below:

- Took at least one developmental course at an institution before transferring to SHSU
- Took at least one developmental course at SHSU
- Took at least one developmental course at both SHSU and an institution before transferring to SHSU
- Did not take any developmental course

Variable Changes

Transfer Credits and Transfer GPA – A student may have more than one transfer institution so we considered the following types of transfer credits and transfer GPA's:

- Overall transfer credits and overall transfer GPA from all transfer institutions
- Transfer credits and transfer GPA from institution with the most credits
- Transfer credits and transfer GPA from institution last attended (most recent institution)

Comparison Groups

We considered three comparison groups for our binary logistic regression model. We looked at each independent variable's graduation rate and developed the three comparison groups by the following:

- Maximum graduation rates of each independent variable
- Average graduation rates of each independent variable
- Minimum graduation rates of each independent variable

Different Models

The Overall transfer GPA and overall transfer credits has a dependent relationship with the recent transfer GPA and recent transfer credits as well as the transfer GPA and transfer credits from the institution with the most credits. Therefore, we considered the following two different models based on transfer credits and transfer GPA:

- Overall transfer GPA and total transfer credits
- Transfer GPA and transfer GPA from both the last institution attended and the institution with the most credits.

Best Model

Average graduation rate comparison group with overall transfer credits and overall transfer GPA.



Recoding Continuous Variables

Continuous Variables:

- Starting Age
- Overall Transfer GPA
- Total Transfer Credits
- Number of Transfer Institutions

Used Percentiles to normalize these continuous variables into categorical variables.

Recoding Continuous Variables

Percentile	Starting Age	Overall Transfer GPA	Total Transfer Credits
1st Percentile	0 – 20	0.0000 – 2.3684	0 – 36
2nd Percentile	21	2.3685 – 2.6452	37 – 53
3rd Percentile	22	2.6453 – 2.9143	54 – 64
4th Percentile	23	2.9144 – 3.2500	65 – 73
5th Percentile	24 and up	3.2501 – 4.0000	74 and Up

Recoding Continuous Variables

Percentile	Number of Transfer Institutions
1 st Percentile	1
2 nd Percentile	2
3 rd Percentile	3 and up

First-Time Transfer Student Success Model



Variable	β	S.E.	Wald	df	Sig.
ETHNICITY			43.276	6	0.000
ETHNICITY (Asian/Pacific Islander)	-0.213	0.276	0.594	1	0.441
ETHNICITY (African American)	-0.243	0.231	1.108	1	0.293
ETHNICITY (Hispanic)	0.133	0.23	0.333	1	0.564
ETHNICITY (International)	0.313	0.306	1.045	1	0.307
ETHNICITY (Unknown)	0.297	0.239	1.545	1	0.214
ETHNICITY (White)	0.151	0.224	0.458	1	0.499
GENDER (Male)	0.033	0.043	0.6	1	0.439
FIRST GENERATION			14.954	2	0.001
FIRST GENERATION (Not First Generation)	0.166	0.045	13.76	1	0.000
FIRST GENERATION (Unknown)	-0.026	0.082	0.097	1	0.755
DEVELOPMENTAL EDUCATION			72.871	3	0.000
DEVELOPMENTAL EDUCATION (Neither)	0.505	0.083	36.793	1	0.000
DEVELOPMENTAL EDUCATION (SHSU Dev)	-0.117	0.136	0.748	1	0.387
DEVELOPMENTAL EDUCATION (Transfer Dev)	0.566	0.081	48.288	1	0.000
STARTING AGE PERCENTILES			198.629	4	0.000
STARTING AGE PERCENTILES (0-20)	0.42	0.078	28.785	1	0.000
STARTING AGE PERCENTILES (21)	0.179	0.081	4.888	1	0.027
STARTING AGE PERCENTILES (23)	-0.035	0.107	0.107	1	0.744
STARTING AGE PERCENTILES (24 and up)	-0.503	0.08	39.787	1	0.000



Variable	β	S.E.	Wald	df	Sig.
TRANSFER INSTITUTION NUMBER			56.797	3	0.000
TRANSFER INSTITUTION NUMBER (Unknown)	-4.415	1.163	14.417	1	0.000
TRANSFER INSTITUTION NUMBER (1)	-0.262	0.048	29.737	1	0.000
TRANSFER INSTITUTION NUMBER (3 and up)	0.085	0.062	1.866	1	0.172
OVERALL TRANSFER GPA			240.199	5	0.000
OVERALL TRANSFER GPA (Unknown)	-0.623	0.575	1.174	1	0.279
OVERALL TRANSFER GPA (0.000-2.368)	-0.546	0.066	69.285	1	0.000
OVERALL TRANSFER GPA (2.369-2.645)	-0.265	0.065	16.745	1	0.000
OVERALL TRANSFER GPA (2.915-3.250)	0.093	0.065	2.042	1	0.153
OVERALL TRANSFER GPA (3.251-4.000)	0.49	0.069	50.626	1	0.000
TOTAL TRANSFER CREDITS			576.243	4	0.000
TOTAL TRANSFER CREDITS (0-36)	-1.38	0.072	370.006	1	0.000
TOTAL TRANSFER CREDITS (37-53)	-0.477	0.065	53.33	1	0.000
TOTAL TRANSFER CREDITS (65-73)	0.327	0.069	22.204	1	0.000
TOTAL TRANSFER CREDITS (74 and up)	0.228	0.073	9.782	1	0.002
CONSTANT	-0.005	0.25	0	1	0.986

First-Time Transfer Student Success Model

$$\ln(y) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_m x_m + \epsilon$$

First-Time Transfer Student Success Model

Constant = $\beta_0 = -.005$

$$\ln(y) = -.005$$



First-Time Transfer Student Success Model

Starting Age (Age):

$$\beta_1 = 0-20 \text{ years old} = .420$$

$$\beta_2 = 21 \text{ years old} = .179$$

$$\beta_3 = 23 \text{ years old} = -.035$$

$$\beta_4 = 24 \text{ years old and up} = -.503$$

$$\ln(y) = -.005 + .420x_{Age(0-20)} + .179x_{Age(21)} - .035x_{Age(23)} - .503x_{Age(24+)} + \dots + \beta_m x_m$$

First-Time Transfer Student Success Model

Overall Transfer GPA (GPA):

$$\beta_5 = 3.251 - 4.000 = .490 \quad \beta_6 = 2.915 - 3.250 = .093 \quad \beta_7 = 2.369 - 2.645 = -.265$$

$$\beta_8 = 0.000 - 2.368 = -.546 \quad \beta_9 = \text{Unknown} = -.623$$

$$\ln(y) = -.005 + .420x_{Age(0-20)} + .179x_{Age(21)} - .035x_{Age(23)} - .503x_{Age(24+)} + .490x_{GPA(3.251-4.00)} \\ + .093x_{GPA(2.915-3.250)} - .265x_{GPA(2.369-2.645)} - .546x_{GPA(0.000-2.368)} - .623x_{GPA(Unknown)} + \dots + \beta_m x_m$$

First-Time Transfer Student Success Model

Total Transfer Credits (Cred):

$$\beta_{10} = 74 \text{ and Up} = .228 \quad \beta_{11} = 65-73 = .327 \quad \beta_{12} = 37-53 = -.477 \quad \beta_{13} = 0-36 = -1.380$$

$$\begin{aligned} \ln(y) = & -.005 + .420x_{Age (0-20)} + .179x_{Age (21)} - .035x_{Age (23)} - .503x_{Age (24+)} + .490x_{GPA (3.251-4.00)} \\ & + .093x_{GPA (2.915-3.250)} - .265x_{GPA (2.369-2.645)} - .546x_{GPA (0.000-2.368)} - .623x_{GPA (Unknown)} \\ & + .228x_{Cred (74+)} + .327x_{Cred (65-73)} - .477x_{Cred (37-53)} - 1.380x_{Cred (0-36)} + \dots + \beta_m x_m \end{aligned}$$

First-Time Transfer Student Success Model

Gender (Gend):

$$\beta_{14} = \text{Male} = .033$$

$$\begin{aligned} \ln(y) = & -.005 + .420x_{Age (0-20)} + .179x_{Age (21)} - .035x_{Age (23)} - .503x_{Age (24+)} + .490x_{GPA (3.251-4.00)} \\ & + .093x_{GPA (2.915-3.250)} - .265x_{GPA (2.369-2.645)} - .546x_{GPA (0.000-2.368)} - .623x_{GPA (Unknown)} \\ & + .228x_{Cred (74+)} + .327x_{Cred (65-73)} - .477x_{Cred (37-53)} - 1.380x_{Cred (0-36)} \\ & + .033x_{Gend (Male)} + \dots + \beta_m x_m \end{aligned}$$

First-Time Transfer Student Success Model

Ethnicity (Ethn):

$$\beta_{15} = \text{Asian/Pacific Islander (AP)} = -.213 \quad \beta_{16} = \text{African American (BL)} = -.243$$

$$\beta_{17} = \text{Hispanic (HI)} = .133 \quad \beta_{18} = \text{International (IN)} = .313$$

$$\beta_{19} = \text{Unknown (UN)} = .297 \quad \beta_{20} = \text{White (WH)} = .151$$

$$\begin{aligned} \ln(y) = & -.005 + .420x_{Age(0-20)} + .179x_{Age(21)} - .035x_{Age(23)} - .503x_{Age(24+)} + .490x_{GPA(3.251-4.00)} \\ & + .093x_{GPA(2.915-3.250)} - .265x_{GPA(2.369-2.645)} - .546x_{GPA(0.000-2.368)} - .623x_{GPA(Unknown)} \\ & + .228x_{Cred(74+)} + .327x_{Cred(65-73)} - .477x_{Cred(37-53)} - 1.380x_{Cred(0-36)} + .033x_{Gend(Male)} \\ & - .213x_{Ethn(AP)} - .243x_{Ethn(BL)} + .133x_{Ethn(HI)} + .313x_{Ethn(IN)} + .297x_{Ethn(UN)} + .151x_{Ethn(WH)} + \dots + \beta_m x_m \end{aligned}$$

First-Time Transfer Student Success Model

First Generation (FG):

$$\beta_{21} = \text{Unknown} = -.026 \quad \beta_{22} = \text{Not First Generation} = .166$$

$$\begin{aligned} \ln(y) = & -.005 + .420x_{Age(0-20)} + .179x_{Age(21)} - .035x_{Age(23)} - .503x_{Age(24+)} + .490x_{GPA(3.251-4.00)} \\ & + .093x_{GPA(2.915-3.250)} - .265x_{GPA(2.369-2.645)} - .546x_{GPA(0.000-2.368)} - .623x_{GPA(Unknown)} \\ & + .228x_{Cred(74+)} + .327x_{Cred(65-73)} - .477x_{Cred(37-53)} - 1.380x_{Cred(0-36)} + .033x_{Gend(Male)} \\ & - .213x_{Ethn(AP)} - .243x_{Ethn(BL)} + .133x_{Ethn(HI)} + .313x_{Ethn(IN)} + .297x_{Ethn(UN)} + .151x_{Ethn(WH)} \\ & - .026x_{FG(Unknown)} + .166x_{FG(Not\ First\ Gen)} + \dots + \beta_m x_m \end{aligned}$$

First-Time Transfer Student Success Model

Institutions Transferred Number (IT):

$$\beta_{23} = \text{Unknown (UN)} = -4.415 \quad \beta_{24} = \text{1 Institution} = -.262 \quad \beta_{25} = \text{3 or more Institutions} = .085$$

$$\begin{aligned} \ln(y) = & -.005 + .420x_{Age (0-20)} + .179x_{Age (21)} - .035x_{Age (23)} - .503x_{Age (24+)} + .490x_{GPA (3.251-4.00)} \\ & + .093x_{GPA (2.915-3.250)} - .265x_{GPA (2.369-2.645)} - .546x_{GPA (0.000-2.368)} - .623x_{GPA (Unknown)} \\ & + .228x_{Cred (74+)} + .327x_{Cred (65-73)} - .477x_{Cred (37-53)} - 1.380x_{Cred (0-36)} + .033x_{Gend (Male)} \\ & - .213x_{Ethn (AP)} - .243x_{Ethn (BL)} + .133x_{Ethn (HI)} + .313x_{Ethn (IN)} + .297x_{Ethn (UN)} + .151x_{Ethn (WH)} \\ & - .026x_{FG (Unknown)} + .166x_{FG (Not First Gen)} - 4.415x_{IT (UN)} - .262x_{IT (1)} - .085x_{IT (3+)} + \dots + \beta_m x_m \end{aligned}$$

First-Time Transfer Student Success Model

Developmental Education(Dev):

β_{26} = Took Dev Ed at SHSU (SHSU) = -.117

β_{27} = Took Dev Ed at Transfer Institution (Trans)= .566

β_{28} = Did not take Dev Ed (Neither)= .505

$$\begin{aligned} \ln(y) = & -.005 + .420x_{Age (0-20)} + .179x_{Age (21)} - .035x_{Age (23)} - .503x_{Age (24+)} + .490x_{GPA (3.251-4.00)} \\ & + .093x_{GPA (2.915-3.250)} - .265x_{GPA (2.369-2.645)} - .546x_{GPA (0.000-2.368)} - .623x_{GPA (Unknown)} \\ & + .228x_{Cred (74+)} + .327x_{Cred (65-73)} - .477x_{Cred (37-53)} - 1.380x_{Cred (0-36)} + .033x_{Gend (Male)} \\ & - .213x_{Ethn (AP)} - .243x_{Ethn (BL)} + .133x_{Ethn (HI)} + .313x_{Ethn (IN)} + .297x_{Ethn (UN)} + .151x_{Ethn (WH)} \\ & - .026x_{FG (Unknown)} + .166x_{FG (Not First Gen)} - 4.415x_{IT (UN)} - .262x_{IT (1)} - .085x_{IT (3+)} \\ & - .117x_{Dev (SHSU)} + .566x_{Dev (Trans)} + .505x_{Dev (Neither)} \end{aligned}$$

First-Time Transfer Student Success Model

$$\begin{aligned} \ln(y) = & - .005 + .420x_{Age (0-20)} + .179x_{Age (21)} - .035x_{Age (23)} - .503x_{Age (24+)} + .490x_{GPA (3.251-4.00)} \\ & + .093x_{GPA (2.915-3.250)} - .265x_{GPA (2.369-2.645)} - .546x_{GPA (0.000-2.368)} - .623x_{GPA (Unknown)} \\ & + .228x_{Cred (74+)} + .327x_{Cred (65-73)} - .477x_{Cred (37-53)} - 1.380x_{Cred (0-36)} \\ & + .033x_{Gend (Male)} \\ & - .213x_{Ethn (AP)} - .243x_{Ethn (BL)} + .133x_{Ethn (HI)} + .313x_{Ethn (IN)} + .297x_{Ethn (UN)} + .151x_{Ethn (WH)} \\ & - .026x_{FG (Unknown)} + .166x_{FG (Not First Gen)} \\ & - 4.415x_{IT (UN)} - .262x_{IT (1)} - .085x_{IT (3+)} \\ & - .117x_{Dev (SHSU)} + .566x_{Dev (Trans)} + .505x_{Dev (Neither)} \\ & + \epsilon \end{aligned}$$

First-Time Transfer Student Success Model Summary

Comparison Group:

- Starting Age = 22 years old
- Transfer GPA = 2.646-2.914
- Transfer Credits = 54-64
- Gender = Female
- Ethnicity = American Indian
- First Generation = First Generation
- Transfer Institution Number = 2 Institutions
- Developmental Education = Both

First-Time Transfer Student Success Model Summary

Most Likely to Succeed in this Model:

- Starting Age = 0 – 20 years old
- Transfer GPA = 3.251 – 4.000
- Transfer Credits = 65 – 73
- Gender = Male
- Ethnicity = International
- First Generation = Non- First Generation
- Transfer Institution Number= 3 or more Institutions
- Developmental Education = Took Dev Ed at Transfer Institution

Contact Information

Rebecca Bowyer

bowyer@shsu.edu

936-294-4433

Alacia Voth

amv007@shsu.edu

936-294-3618

