EXAMINING FACULTY AND STAFF WILLINGNESS-TO-PAY FOR CAMPUS HOUSING AT CSU DOMINGUEZ HILLS

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ABSTRACT

California State University Dominguez Hills is an inner-urban, highly ethnically- and economically-diverse commuter campus in the South Bay region of Los Angeles County. Significant growth in student and faculty numbers over the past decade, allied with recent investment in instructional and resident buildings mean that the university is transitioning towards a destination campus. Faculty and staff residence on campus, and involvement in student halls programming, can enhance student experience and learning outcomes; however, it is not clear in terms of theory or prior literature whether faculty and staff would be attracted to campus housing. We conducted an online survey of 487 faculty and staff—a 26 percent response rate—regarding their current housing situation and potential interest in, and willingness to pay for, proposed campus housing. Results suggest an 11 percent subsidy for a 2 bedroom unit, and a 28 percent subsidy for a 3 bedroom unit, would be required to attract the average faculty and staff member to live on campus. Econometric analysis using an Ordered Probit Regression (OPR) model indicates that being female, having elders in the household, being the householder or spouse of a householder, the level of housing expenses, and family income levels are the main positive determinants of willingness-to-pay for proposed housing on campus. This analysis can inform university and college administrators about faculty and staff housing choices and possible incentive programs to attract them to reside on campus, and moreover can provide a model for similar surveys and analyses.

Keywords: Staff and faculty housing choices; campus development; willingness-to-pay; econometric analysis; incentives.

INTRODUCTION

California State University Dominguez Hills (CSUDH)—a four-year university in an urban location with a diverse student body and faculty—has traditionally been a commuter campus with plentiful parking yet limited student and faculty housing [8] [30]. Class schedules are often designed with working professional in mind, including evening and online classes, and hence, as shown in Figure 1, many faculty are able to live significant distances from campus; unlike administrative staff, who tend to live within 10 miles of campus. Student demand for housing has traditionally been low. While many students come from local and neighboring communities, they

are also likely to be from lower socio-economic groups and the first generation in their family to attend college [7].

CSUDH has grown significantly over the past decade, in terms of student and faculty numbers [16]. Student housing is currently being built, and plans are being developed for a "University Village" area of mixed-use development that could provide housing on campus for faculty, staff, and other workers in the region [6]. As CSUDH grows and transitions to become a "destination campus" rather than a commuter campus [9] [16], administration are keen to understand faculty and staff current housing choices as well as demand and willingness-to-pay for proposed campus housing.

CSUDH administration are interested in faculty and staff housing for a number of reasons. Faculty and staff presence and residence in or nearby student housing can help to support student housing goals, such as improving the quality of student experience and student welfare, increasing graduation and retention rates, and enhancing student learning outcomes [18] [34]. As CSUDH aims to transition from a "commuter campus" into a "destination campus", additional student housing is being built and faculty and staff-involved programming is being considered, especially in terms of the type of programming that can promote the development of a campus culture in different respects, including augmenting student and faculty experiences and improving student learning and career outcomes [13] [18] [34].

Faculty and staff housing can also support recruitment and retention of faculty [13]. If faculty and staff are not able to find a place to live that suits them or their family's preferences, then they are less likely to accept the position, or more likely to move to competing institution in subsequent years. This issue might be a particular concern when hiring diverse faculty members [12] [29] and in terms of the impact on diverse student bodies [3], both of which are primary for CSUDH.

This paper explores the potential transition of CSUDH from a commuter to a destination campus, especially in terms of staff and faculty housing choices. Numerous social theories could explain if and how such a transition could take place, which are explored further in the literature review section. These general theories of housing choices and the work-jobs phenomenon are explored in lieu of more specific theories or empirical studies about the issue of faculty and staff transitioning to campus housing. A housing survey instrument is used to gather data assessing the CSUDH faculty and staff housing needs and the level of interest in on-campus housing proposed in the University Village development plan. Willingness-to-pay calculations highlight the subsidies or incentives required to attract faculty and staff to proposed campus housing, while econometric analysis explores the factors appearing to influence faculty and staff demand for proposed campus housing.

While this study aims to inform administrators at college campuses nationwide, an important caveat is that results from a commuter-campus in an urban environment are not necessarily generalizable to all US campuses. That said, commuter campuses are not uncommon in the US. According to data from the 2018-19 academic year, there were 87 US campuses with 90% or more students living off-campus [25].

On the other hand, this statistic highlights a notable limitation with this study, namely that 95% of CSUDH students commute to campus, which puts the university in a unique position. Other high-commuting campuses are also in urban areas with high housing prices. While the findings and approach used in this study might be useful for administrators at schools with higher rates of campus housing and less urban environments, an important caveat with this study is that the results might not be generalizable beyond the unique context in which CSUDH exists.

LITERATURE REVIEW

Faculty and staff housing issues have been researched in the academic literature specifically in terms of higher education and campus housing. This literature covers two important elements: first, the role of housing in the recruitment and retention of faculty [1] [3] [12] [13] [19] [20] [28] [29]; and second, the role that faculty can play in programming around student campus housing [13] [18] [34]. Both elements play an important role in developing the culture of a campus, yet the question of whether faculty and staff can be attracted to live on campus in the first place remains unexplored.

CSUDH is an attractive campus to work at because of its culture and mission, the community it serves, its faculty and staff, its location in Southern California, and its proximity to some of the most important ports and airports in the nation. In 2017, despite having an above average applications per search among CSU campus (68 per search compared to 57 per search CSU average), the campus has the lowest appointment success rate (63% compared to 86% CSU average; Average hire wages at CSUDH of $80,098 are a little below the CSU average of $82,295, while the average moving expenses fund is $2,600 compared to the CSU average of $3,699.) [5]. Moreover, the resignation rate of probationary faculty—4.1% in 2017—was higher than the CSU-wide average of 3.1%. Given the high cost of housing in the area surrounding campus, it is possible that housing concerns are a factor here. Providing more quality housing for faculty and staff on campus has the potential to address this issue, however little attention has been paid in the literature to staff and faculty housing choices in general, and whether staff and faculty are either interested in campus housing, or might be attracted if incentives are provided.

The economic utilitarian perspective—i.e. that when making decisions, individuals attempt to maximize utility or benefits and minimize costs—can help to explain housing choices in general, and specifically the willingness of staff and faculty to move to campus. Housing choices are tied to workplace location—and hence commute time and transportation convenience—alongside numerous factors such as school quality, relative housing prices, local amenities, and housing quality [15]. These issues are researched extensively in the areas of urban and regional economics [2] [4] [24] and transportation studies [15] [23] [27] [32] [35]. These studies focus on the housing choices made by workers, for which transportation accessibility is a key factor.

The implications of this perspective are that staff and faculty are making complex but well-informed utility-maximizing housing choices. Figure 1 highlights that the majority of respondents (75 percent) live within 20 miles of campus. Figure 1 presents housing locations of CSUDH employees by position, with full-time faculty represented in red, full-time staff represented in yellow, part-time faculty represented in green, and part-time staff represented in blue. While employees of each category live across the region, general clusters are noticeable. Full-time faculty

are spread along the coastal areas of Los Angeles and Orange Counties, likely reflect full-time faculty's higher pay and flexibility to work from home more often. Studies in the "telecommuting" literature [e.g. 36] have found that workers with the ability to telecommute tend to live further from their workplace.

However, the economic utilitarian perspective assumes the availability of complete and quality information on the part of staff and faculty, and that individuals are able to remove psychological and sociological factors among others from their decision making processes. It is possible that new staff and faculty, especially those moving from outside the state, have limited information about factors such as local housing markets, commute patterns, and local amenities, and hence could be attracted to campus housing that provides a period for the individuals to improve their information about housing choices. On the other hand, faculty and staff with a longer employment term on campus may be less likely to move due to psychological factors such as the "endowment effect" [21] and risk aversion under uncertainty [22].

These theories combined would suggest that particular types of staff and faculty might be attracted to living on or close to campus, especially new faculty and visiting faculty. Similarly, those faculty and staff with a particular commitment to student residence programming or the campus community, or those with an aversion to travel, might be attracted to campus housing. Another case might be senior faculty wishing to save on housing costs by downsizing after dependents have moved elsewhere. Individuals within each of these conditions might be willing to move to campus if housing is available, following a notion of "induced demand" [10] or "latent demand" [33]. However, for those without these conditions, it is also possible that their benefit-cost calculations might be influenced by subsidies or incentives provided by university administration to encourage staff and faculty to move to campus.

While these help to explain the likely causes and consequences of improved faculty and staff housing support by their employers, there does not appear to be any research into the factors influencing faculty housing choices, nor whether faculty housing support provided by universities might influence such decisions. This research project aims at making the first steps into this area and gain a deeper understanding of faculty and staff housing choices, the factors influencing them, and the extent to which campus programs could encourage faculty and staff to live closer to campus.

DATA AND METHODS

Between February 13th and March 1st of 2019, a confidential online survey was conducted. Toward this end**,** 1,895 employees were emailed, eliciting 487 completed responses, representing a 26 percent participation rate overall. The survey featured 34 questions: some questions were closed-ended, some were rating scale, and some were rank-order questions. Demographic questions solicited participants' gender, age, marital status, household characteristics, place of residence, employment at CSUDH, transportation to and from work, housing ownership, expenditures, type, preferences, willingness to pay, and satisfaction. To explore the hypotheses, this paper first compares summary statistics and ANOVA cross-tabulations (Table 1), and second conducts regression analysis using OPROBIT regression estimation (Table 3) to explore the factors

influencing faculty and staff willingness-to-pay for proposed campus housing (summary results in Table 2).

Table 1 presents the summary statistics for full-time staff (1), part-time faculty (2), and full-time faculty (3). Columns in between (labeled "Diff (1),(2)" and so on) represent the statistical significance of t-test results that compare the means between specific groups. The tested hypothesis is that the means are the same for both groups. The last column (ANOVA) represents the statistical significance of the f-test results that compare the means for all groups. Here, the tested hypothesis is that the means for all groups are the same. The following discussion focuses on the summary statistics related to the theoretical explanations for staff and faculty housing choices discussed in the literature review.

The majority of survey respondents are full-time staff, reflecting that the majority of full time employees at CSUDH belong to this category. Almost 30 percent of respondents were full-time faculty. Among these, the largest group is Assistant Professors, followed by Professors, Associate Professors, and Lecturers. Tenured faculty represents around 48 percent of all full-time faculty. Full-time staff are more likely to choose a 1 bedroom apartment than part-time and full-time faculty, but they also have the largest household size. Part-time faculty are more likely to choose a 2 bedroom apartment and full-time faculty are more likely to choose a 3 bedroom apartment. Accordingly, full-time staff have the lowest willingness to pay for a rental unit on campus, followed by part-time faculty and full-time faculty.

In terms of plans to move in the long run, full-time faculty have the lowest rate, followed by part-time faculty and full-time staff. Finally, there are no statistical differences in terms of the groups' level of satisfaction with their current homes, but full-time staff have the lowest rate. Lecturers tend to prefer 1 bedroom apartment more than any other group, but this group also has the largest household size. For 2 bedroom apartments, assistant and associate professors have the highest preferences, followed by full professors and lecturers. Full professor have the largest preference rate for 3 bedroom apartments, but the differences with other groups are not statistically significant. Similarly, associate professor have the largest willingness to pay for a rental unit on campus, followed by full professors, assistant professors, and lecturers, but the differences with other groups are not statistically significant. Lecturers have fewer plans to move and are more satisfied with their current home than assistant professors, but associate professor have fewer plans not to move and higher satisfaction levels than lecturers. Full professors have the largest satisfaction levels and the lowest plans to move than any other group.

For the 90 percent of respondents**,** living five or more miles from campus, the three most common responses were for less than desired quality of housing near campus, location amenities less than desired near campus, and higher housing prices near campus. For the "Other" category, responses vary significantly, from people responding that they previously owned a home on or near campus, they love where they live now, prefer to live close to the beach, wages are too low near campus, there are few restaurants around campus, etc.

Considering only the people who rent, the percentages for planning to move but remain in the county are around 48 percent and 49 percent for short-term and long-term, respectively. Finally, around 31 percent of respondents are very satisfied with their current home and around 42 percent

are satisfied. Among renters, only around 13 percent are very satisfied and around 45 percent are satisfied. For the 27 percent of respondents who state not being satisfied with their current home, this survey also asks for the 3 main reasons not being satisfied with their current home. The most common responses are inadequate size, too expensive, and other. Living too far from work and high insecurity and crime rates were also popular responses. Among the "Other" category, responses also varied significantly from parking issues, problems with the landlord, and the overall quality of their housing. These responses paint a picture of a staff and faculty population's section that might not be happy with their current housing conditions mainly due to affordability issues that force them to live far from campus and/or in inadequate places. The most commonly reported important amenities responses are secured access, grocery stores**,** and well-maintained common areas. Covered parking, pet friendly facilities, and fitness and wellness center are also relatively important.

Willingness to Pay and the Price Sensitivity Meter

Most respondents preferred a 2 and 3 bedroom apartment and few chose a studio or a 1 bedroom apartment. Based on these choices, the survey asks explicitly for their willingness to pay for a housing rental unit on campus, while giving them some information about average rental rates for similar size units around campus. Toward this end**,** the survey used Van Westendorp's Price Sensitivity Meter (PSM), a marketing analysis technique that tries to assess respondents' willingness to pay, and consequently the value they assign, for a product by asking them a series of questions about what prices they consider too expensive, too cheap, somewhat expensive, and a bargain [26]. We assume respondents have a clear measure of value for a particular good. Four different curves are generated and graphed using the cumulative percentages (y-axis) for different price categories (x-axis). Each point in the graph corresponds to a specific price category and the corresponding cumulative percentage of responses for such price. The corresponding price for the intersection between the "too expensive" and the "too cheap" curves represents the point of "marginal cheapness" (results are reported in Table 2). Values between the point of marginal cheapness and the point of marginal expensiveness represents the range of reasonable pricing values, but the intersection between the "too expensive" and "bargain" curves is referred as the "optimal price" point. Some scholars suggest using the optimal price point as the actual price, but others suggest simply using the point of marginal expensiveness [see, e.g. 11].

As shown in Table 2, for 1 bedroom apartments, the 64 valid responses—a response is considered valid when the "too expensive" price is greater or equal than the explicit willingness to pay and the "bargain" price is greater or equal than the "too cheap" price—suggest that respondents are willing to pay between $1,350 (average explicit willingness to pay) and $1,400 (optimal price point), compared to the current rental rate for a 1 bedroom apartment within 3 miles of campus of $1,531. For 2 bedroom apartments, the 152 valid responses suggest that respondents are willing to pay between $1,650 (average explicit willingness to pay) and $1,750 (optimal price point), compared to the current rental rate for a 1 bedroom apartment around campus of $1,850. For 3 bedroom apartments, the 138 valid responses suggest that respondents are willing to pay between $1,900 (average explicit willingness to pay) and $2,000 (optimal price point), compared to the current rental rate for a 1 bedroom apartment around campus of $2,650. Following this logic, if the University wished to attract the average faculty and staff member to

campus, subsidies of 9-12% would be required for 1 bedroom units, 5-11% for the 2 bedroom units, and 25-28% for the 3 bedroom units.

Econometric Analysis

This section presents the econometric analysis results that considers the explicit willingness to pay for a housing unit on campus as the dependent variable and several demographic characteristics as explanatory variables. These demographic variables describe participants' gender, age, marital status, household characteristics, place of residence, employment at CSUDH, and housing ownership, expenditures, type, preferences, and satisfaction. Other variables were constructed to fit better the econometric model.

Willingness to Pay is constructed from the 12 price categories' responses for the explicit willingness to pay question, which is conditional on the type of housing chosen. Given that the difference between price categories is not constant (for example, difference between price categories 1 and 2 is not the same as the difference between categories 10 and 11) we decided to condense all the responses into 3 intuitive categories. These categories are represented by 3 values, one for below average (1), one for average (2), and one for above average (3) willingness to pay.

Female and Married are dummy variables (1 if the response fits the category and 0 otherwise) and "Hhld Size" represents the number of occupants in the respondent's home. Minors, Elders, and Householder are dummy variables. Recent Hire is a dummy variable that takes on a value of 1 if the respondent has been employed at CSUDH from 0-2 years, and 0 otherwise. FT Staff is a dummy variable for full-time staff, and Tenured is a dummy variable for tenured faculty, which applies only to full-time faculty.

Travel Time to work, Distance to campus, Housing Expenses, Percentage of Income on Housing, and Family Income variables were constructed in a similar way than the dependent variable. From each variable, there are 3 different variables corresponding to average, below average (BA), and above average (AA). The omitted category for these variables is the average category. Single Family Home is a dummy variable and Very Satisfied is a dummy variable that corresponds to "very satisfied" in the current home satisfaction level question. Finally, Not Moving (LR) is a dummy for the long-term plans to move and Housing Choice corresponds to the 4 different rental housing options, Studio and 1-3 bedroom apartments.

As our dependent variable, willingness to pay (WTP), is categorical, applying Ordinary Least Squares (OLS) regression might be innapropriate. A better alternative might be using Multinomial Logistic Regression (MLR), which can be used with categorical dependent variables and modeled using Maximum-Likelihood Estimation (MLE) [31]. This type of regression fits well when the dependent variable is coded as different categories, for example, marital status (married, divorced, never married, etc.), political affiliation (democrat, republican, independent, etc.), or the preferred item off a menu. In this case, the coefficent estimates relate information about how the independent variables affect the probability of belonging to each one of those categories.

However, in our case, the ordinal nature of the dependent variable categories has valuable information that MLR does not consider. In other words, the different WTP categories tell us

something useful about different groups. Examples of ordinal categories include satisfaction levels (satisfied, neutral, dissatisfied), educational attainment (high school drop-out, high school certificate, college graduate, graduate degree), or, as in our case, willingness to pay (below average, average, above average). The coefficent estimates in this case relate inforamtion about how the independent variables affect the probability of moving to the next category. Correspondigly, we use an Ordered Probit Regression (OPR) model and estimate the model using MLE.

To summarize the ordered probit results and the above and below WTP marginal effects, Table 3 presents only the results that are significantly correlated with WTP for all respondents and those choosing a 2 & 3 bedroom apartments. The sign (+ or -) corresponds to positive or negative coefficient and marginal effect estimates and the number of signs corresponds to the significance level (3 signs for $p<0.01$, 2 signs for $p<0.05$, and 1 sign for $p<0.10$); specific coefficient results of note are provided in the text. Given the ordered nature of the dependent variable, a positive sign for the estimated coefficient means that when the independent variable increases by one unit, the probability that the respondent belongs to a higher WTP category increases (and vice versa if a negative sign). Correspondingly, the probability that the respondent belongs to a lower WTP group decreases (and vice versa if a negative sign).

According to the ordered probit coefficients, being female increases the probability of belonging to the above average WTP category by around 6 percentage points. (The estimated OPR coefficients (betas) do not represent the partial derivatives of the regression function from a change in the independent variable, so they could not be readily interpreted as changes in probabilities, as with linear regression models.) Correspondingly, the probability of belonging to the below average category is reduced by around 6 percentage points for females. Respondents who have an elder at home have a 9 percent higher probability of belonging to the above average WTP category.

Being the householder or the spouse of householder increases the probability of having a higher WTP by almost 13 percent. The estimates for housing expenses suggest that respondents in households with above average housing expenses have a 10 percent higher probability of belonging to the above average WTP category and those with below average housing expenses have a 15 percent lower probability of belonging to the above average catergory. The intuition in this case might be that, since we are controlling for family income, this type of household are accustomed to spending more, so housing might be just one of those expenses. For family income, respondents who belong to a higher income family have a 14 percent higher probability of belonging to a higher WTP category, which suggests that housing is a normal good for this type of households. The estimates for housing choice suggest that those who choose a larger unit have almost 16 percent higher probability to belong to the above average WTP for housing on campus.

Given that WTP depends significantly on the housing choice, we analyze the WTP decisions for 2 and 3 bedroom apartments separately[1]. According to OPR coefficient estimates, household size and being full time staff are negatively correlated with WTP for a 2 bedroom apartment. Respondents with travel times above average and having housing expenses below average are less likely to be willing to pay more for a 2 bedroom apartment. On the other hand, respondents who

[1] The percentage of respondents that prefer a studio or 1 bedroom apartment is too low to provide reliable regression and marginal effects estimates.

have minors in the household, have family income above average, and own a single family home are more likely to be willing to pay more for a 2 bedroom apartment. One of the main differences for this group compared to all respondents is that the estimated coefficients for ordered probit and marginal effects for having above average WTP are negative and significant for full time faculty and respondents with above average travel time to work. The results are positive and significant for households with minors and those who own a single family home.

In terms of marginal effects, having one more household member decreases the probability of having above average WTP for a 2 bedroom apartment by around 4 percent. Having minors in the household increases the probability of having above average WTP for a 2 bedroom apartment by around 12 percent. Full time staff have a 12 percent higher probability of having below average WTP for a 2 bedroom apartment. Those who have above average travel time are more likely of having below average WTP of about 13 percent. Having housing expenses below average increases the probability of having a WTP below average by almost 22 percent. Family income above average decreases the probability of having a WTP below average by almost 22 percent. Finally, respondents who own a single family home have an 8 percent higher probability of having a WTP above average for a 2 bedroom apartment.

Similar to the results for all respondents and those who prefer a 2 bedroom apartment, the OPR estimated coefficients and marginal effects for having above average WTP are positive and significant for being female, having elders in the household, having above average housing expenses, and having family income above average. On the other hand, the estimated coefficients and marginal effects are negative and significant for being married and for those who are tenured and positive and significant for those with travel time below average.

LIMITATIONS AND EXTENSIONS

This faculty and staff housing survey solicited information from part-time and full-time staff and faculty, including administrators, regarding their current housing situation, potential interest in residing on a campus housing project, residential amenities they value, cost considerations, and other important factors regarding housing. Prior literature covers the role of housing in recruitment and retention and the faculty's role in programming around student campus housing [13] [18] [34]. However, the previous studies did not explore whether faculty and staff can be attracted to live on campus or not. This study is unique and represents an addition to the literature as it discusses the determinants of housing choice by university faculty and staff. In other words, the study examines the factors that makes it appealing and attractive to faculty and staff to live on campus and fill in the gap of this question in the previous literature. The analysis can therefore provide a model for other future studies or similar surveys and analyses at other universities or institutions.

The findings from this study can also be used by administrators to evaluate the extent campus programs could encourage faculty and staff to live closer to campus. This study provides a model survey and analytical approach that could be tailored to the needs of college campus considering investment in campus housing, and whether to include allocations for staff and faculty. As discussed above, CSUDH is a commuter school, which is not uncommon in the US: in the 2018-19 academic year, 87 US campuses had 90% or more of students living off-campus [25].

On the other hand, this statistic highlights a notable limitation with this study, namely that 95% of CSUDH students commute to campus, which puts the university in a unique position. Other high-commuting campuses are also in urban areas with high housing prices. While the findings and approach used in this study might be useful for administrators at schools with higher rates of campus housing and less-urban environments, an important caveat with this study is that the results might not be generalizable beyond the unique context in which CSUDH exists.

Another limitation is that the findings from this study cannot answer some specific questions that might be of special interest to decision makers in order to assess the economic viability of a housing project for faculty and staff at CSUDH. For example, what percentage of faculty and staff might be willing to change their current housing situation to move to a housing unit on campus? In fact, we estimate that few faculty and staff, particularly those in families who already own a house, might be willing to move to a housing unit on campus. For recent and incoming hires, what percentage of new faculty and staff are willing to move to a housing unit on campus and what role did the availability or the lack of housing on campus play in their decision to apply for a job and in the decision to accept a position at CSUDH?

To answer the latter, perhaps a separate survey or study that covers faculty and staff at CSUDH would provide more specific answers. Such survey might be applied not only for all job separations or declined offers by top candidates, but also for faculty and staff accepting employment at CSUDH.

CONCLUSION

This study aims to make the first steps to gain a deeper understanding of faculty and staff housing choices, the factors influencing them, and to what extent campus programs could encourage faculty and staff to live closer to campus. The survey responses were used to develop a picture of demographic characteristics of part-time and full-time faculty and staff, and the results were compared for different groups. Additionally, the survey responses allowed the development of maps that present the geographical distribution of faculty, staff, and specific academic groups. The application of the Price Sensitivity Meter technique and an econometric analysis allowed us to calculate the respondents' willingness to pay for different housing options and the factors that affect such willingness to pay.

The Van Westendorp Price Sensitivity Meter technique is used to estimate that respondents tend to prefer 2 and 3 bedroom apartments and are willing to pay between $1,650 and $1,750 for a 2 bedroom apartment and between $1,900 and $2,000 for a 3 bedroom apartment on campus. Econometric analysis of survey responses indicates that being female, having elders in the household, being the householder or spouse of householder, housing expenses, and family income are the main determinants of willingness to pay for housing on campus, and they all are positively correlated with willingness to pay for rental apartments on campus.

Overall, the results from this faculty and staff housing survey might represent a valuable tool to the University administration when trying to attract and retain valuable faculty and staff in order to fulfill the university mission to provide education, scholarship, and service that are, by design, accessible and transformative. This becomes particularly important given that several other CSU

campuses already offer some type of faculty and staff housing assistance. Furthermore, this survey might inform the University administration as it tries to convert CSUDH from a commuter campus to a destination campus.

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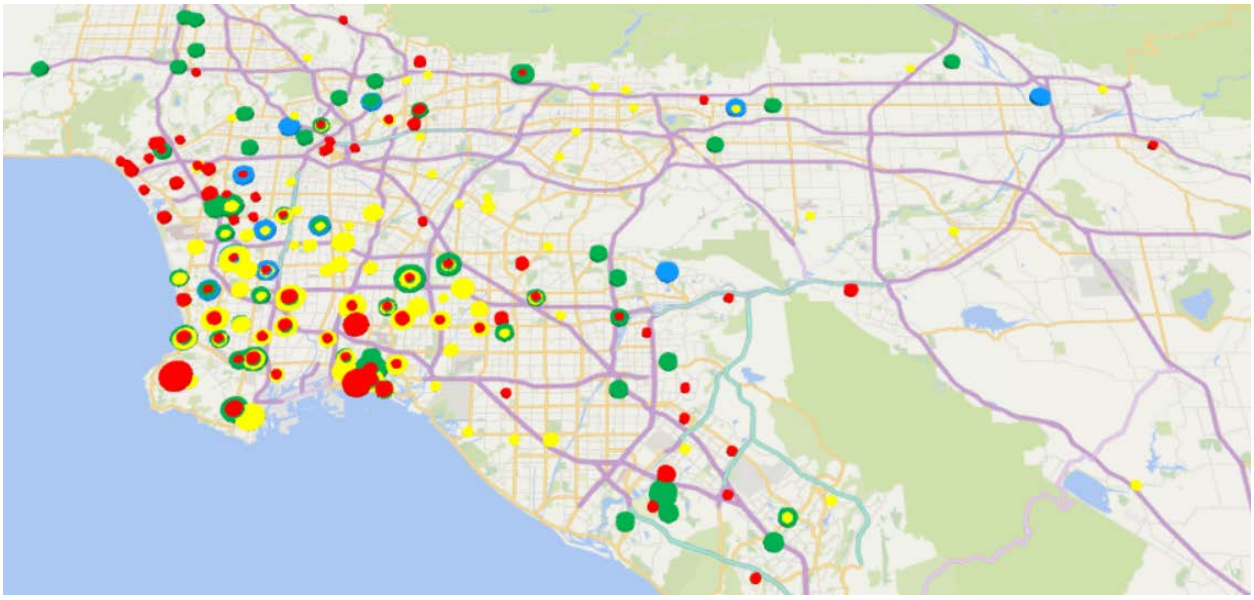
TABLES AND FIGURES

Figure 1. CSUDH Employee Housing Locations by Position



Key. Red: Full-Time Faculty. Yellow: Full-Time Staff. Green: Part-Time Faculty. Blue: Part-Time Staff

Table 1. Summary Statistics by Position

Variable	(1) Full-Time Staff[b]	Diff (1),(2)[a]	(2) Part-Time Faculty[b]	Diff (2),(3)[a]	(3) Full-Time Faculty[b]	Diff (1),(3)[a]	ANOVA[c]
Female	0.694	**	0.541		0.610	*	
	(0.694)		(0.540)		(0.609)		
Age	43.22	***	49.22		47.63	***	
	(11.83)		(12.40)		(11.32)		
Married	0.536		0.608		0.645	**	
	(0.499)		(0.491)		(0.480)		
Household Size	2.863		2.554		2.504	**	
	(1.458)		(1.335)		(1.274)		
Years Employed DH	9.149	**	6.973		8.422		
	(8.221)		(6.980)		(7.313)		
Travel Time To Work	35.07	*	39.61		36.83		
	(20.20)		(22.58)		(20.07)		
Distance to DH	15.03	***	21.47		19.08	***	
	(12.04)		(15.15)		(13.69)		
Important Owning Home	0.532		0.581		0.539		
	(0.499)		(0.496)		(0.500)		
Renting	0.572		0.409		0.438		
	(0.495)		(0.495)		(0.498)		
1 Bedroom Apt	0.171		0.095		0.106	*	***
	(0.376)		(0.294)		(0.309)		
2 Bedroom Apt	0.361		0.392		0.383		
	(0.481)		(0.491)		(0.487)		
3 Bedroom Apt	0.337		0.378		0.426	*	
	(0.473)		(0.488)		(0.496)		
Willingness To Pay	1,649	**	1,811		1,872.95	***	
	(554.3)		(508.7)		(622.8)		
Monthly Housing Expenses	2,056		2,089	**	2,487	***	
	(1,124)		(1,160)		(1,099)		
Gross Family Income	98,492	*	112,355	***	135,485	***	***
	(55,084)		(62,679)		(55,303)		
Not Moving (LR)	0.302		0.365		0.447	***	
	(0.459)		(0.484)		(0.498)		
Very Satisfied With Housing	0.262		0.297		0.305		
	(0.440)		(0.460)		(0.462)		
Number of respondents	252		74		141		

[a]Mean values are in the first row for each variable; Standard deviations are in parentheses in the second row.
[b]These columns represent the statistical significance of t-test results that compare the means between specific groups. The tested hypothesis is that the means are the same for both groups.
[c]The last column presents the statistical significance of f-test results that compare the means for all groups
* p<0.10, ** p<0.05, *** p<0.01.

Table 2. Explicit and Implicit Willingness to Pay

Rental Unit Type	(A) Point of Marginal Cheapness	(B) Point of Marginal Expensiveness	(C) Explicit WTP	(D) Point of Marginal Campus	(D-B) Gap 1	(D-C) Gap 2
1 Bed	$1,250	$1,400	$1,350	$1,531	$131 (9%)	$181 (12%)
2 Beds	$1,500	$1,750	$1,650	$1,850	$100 (5%)	$200 (11%)
3 Beds	$1,750	$2,000	$1,900	$2,650	$650 (25%)	$750 (28%)

Calculations are based on the Van Westendorp's Price Sensitivity Meter

Table 3. OProbit Results and Average Marginal Effects (Significant Results)

	Oprobit			**Below Average**			**Above Average**		
	All	2 bdr	3 bdr	All	2 bdr	3 bdr	All	2 bdr	3 bdr
Female	+		++	-		--	+		++
Married			-			+			-
Hhld Size		-			+			-	
Minors		++			---			++	
Elders	+		+++	-		---	+		+++
Householder	+++			---			+++		
FT Staff		-			+			-	
Tenured			--			++			--
Travel Time (BA)			++			--			++
Travel Time (AA)		-			+			-	
Housing Expenses (BA)	---	---		+++	+++		---	--	
Housing Expenses (AA)	+++	+	+++	---	-	---	+++	+	+++
Family Income (AA)	+++	++	++	---	--	--	+++	+++	++
Single Family Home		+			-			+	
Housing Choice	+++			---			+++		

Direction of relationship is represented with + or -; strength of relationship is represented by the number of symbols, e.g. +++: p=0.01, ++: p=0.05, +: p=0.10