

# ***Attracting “Otherwise Bright” Women to Economics: An Administrative Strategy for Small to Medium Size Economics Departments***

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## **ABSTRACT**

This paper reports on a departmental strategy that targets students in the one-semester introductory economics survey course for non-majors by (1) aggressively marketing the economics degree, and (2) allowing high achieving students to waive the macroeconomic principles requirement for an economics degree. A detailed analysis of 602 student transcripts over a period of 33 years suggests that the waiver policy has not disadvantaged students in subsequent upper-level economics courses. On the contrary, women entering the economics program through the survey course have both significantly improved gender balance and the overall academic performance of economics students.

## **Attracting “Otherwise Bright” Women to Economics**

As academic departments vie over increasingly scarce institutional resources, student enrollment and diversity issues, such as gender balance, are taking on added importance. Departments that can increase the number of degrees awarded while at the same time improve academic performance and gender balance—legitimate goals in their own right—may be able to improve their relative standing with regard to institutional resource allocation. In economics, there have been a number of suggestions on how the introductory course for non-majors could be transformed to attract more students to the discipline. Bartlett (1995) proposed ways to attract “otherwise bright students” to introductory economics courses. Following Bartlett, our use of the phrase “otherwise bright” is intended to refer to talented, capable students who, at least initially, are not intending to major or minor in economics. Bartlett addressed both a concern over the decline in undergraduate economics majors at the time (Siegfried and Scott, 1994) and a more general perception that the content and climate of introductory level economics courses may discourage bright undeclared students, particularly women, from taking their first economics course. More recently, Siegfried (2007) reported that even though the number of economics degrees increased from 1997 through 2005 (with a slight decline in 2006), the number of undergraduate economics degrees awarded to women declined steadily between 2001 and 2006. Over the longer period 1991-2006, the share of economics degrees awarded to women increased, but at approximately half the rate as the share of women among all college graduates. Thus, economics has been falling behind other disciplines in attracting women.

Building on the work of earlier critiques of introductory economics (e.g., Saunders and Walstad, 1990), Bartlett (1995) primarily focused on attracting more students to introductory economics by changing the content and climate of the course itself. More recently, Becker, Becker, and Watts (2006), and Hansen, Salemi, and Siegfried (2002) have offered pedagogical recommendations for the economics classroom. Improving economics pedagogy is a desirable goal, but some economics departments may be able to increase the likelihood that students entering the introductory course for non-majors will seek an economics degree by adopting a purely *administrative* strategy.

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This paper reports on a departmental policy designed to attract more students to the economics program by targeting “otherwise bright students” enrolled in an introductory economics survey course, which is intended for students *not* majoring in economics or business. Rather than making wholesale changes to the introductory course itself, the department adopted a subtle but significant policy regarding how the course counts toward a student’s degree if that student subsequently decides to major or minor in economics. In short, the policy allows high-performing students in the introductory survey course for non-majors to substitute that course for the macroeconomic principles requirement in the economics degree. By doing so, the department has been able to target a segment of the university student body that originally was not inclined to seek an economics degree, or for that matter take any additional economics courses, and to identify the students with apparent aptitude for economics. By offering high-performing survey students a waiver of the macro principles requirement, the department has lowered the marginal cost of pursuing an economics degree for those students.

This paper analyzes 33 years of institutional data to gain insight into the characteristics of students who pursued an economics degree via the traditional micro-macro principles sequence versus those students who entered the discipline through the principles survey course for non-majors. The analysis suggests that the departmental policy that waives macroeconomic principles for high-performing survey students has not disadvantaged those students in subsequent upper-level economics courses. In addition, the success the department has had in attaining a better gender balance can largely be attributed to women entering the discipline through the survey course.

### **Institutional Background**

Founded in 1968 and situated in southeast Wisconsin, the University of Wisconsin-Parkside is one of thirteen comprehensive public universities in the state. The total enrollment of UW-Parkside is approximately 5,000—55% of whom are female. The student body is the most racially and economically diverse in the UW-System, with the majority of incoming freshmen being first-generation college students. The Department of Economics is comprised of four tenure track faculty, one full-time lecturer, and one associate lecturer (adjunct instructor) and is located within the College of Arts and Sciences. The department has a large service responsibility to the School of Business and Technology, primarily through its principles of microeconomics and principles of macroeconomics courses. The yearly number of economics degrees varies considerably, but over the past 10 years the department has averaged approximately nine degrees (majors and minors) per year.

### **Targeting High-Performing Non-Economics/Business Students**

Like many economics departments across the country, UW-Parkside offers three introductory level economics courses: a two-semester microeconomics–macroeconomics principles sequence, which is required in the economics and business programs; and, a one-semester, combined micro and macro survey course designed for students *not* majoring in economics or business. The survey course is required for students seeking teacher education certification and it can be taken as partial fulfillment of general education requirements. In a typical semester, the department offers three sections of the survey course with total enrollment of approximately 100 students. Given the exclusivity of the survey course, virtually all students enroll in the course with no intention of taking another economics course. In an effort to appeal to students who had not intended to pursue economics, from its inception, the department made an administrative decision to waive the macroeconomic principles requirement for students who had performed sufficiently well in the survey course, subsequently decided to major or minor in economics, and petitioned the department for a waiver. At the same time, the department directed instructors of the survey course to place particular emphasis on macroeconomic topics. Over the entire 33 year period of this study, the survey course has been taught in a traditional micro-macro fashion; specifically, the survey is not an “issues” course. In terms of coverage, microeconomic topics have been limited to demand and supply, and international trade, with primary focus on traditional macroeconomic topics of macro measurement, and fiscal and monetary policy.

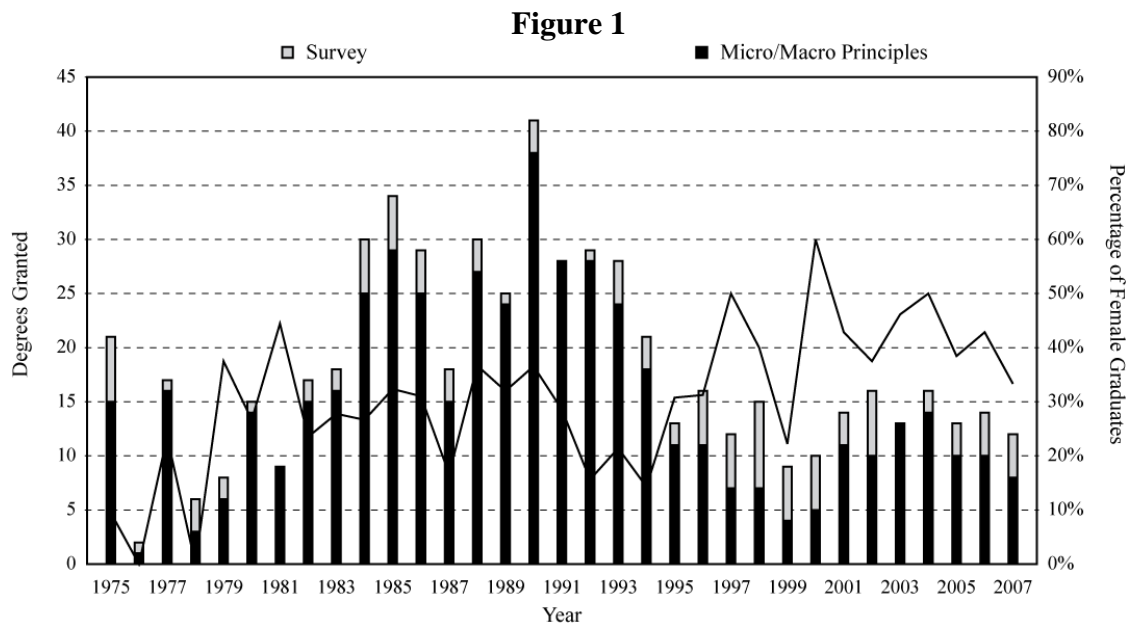
Prior to 1991, the department did not publicize the waiver policy and invoked it only when high-performing survey students initiated conversations with instructors about majoring or minoring in economics. In the pre-1991 period, the department did not formally define “high-performance,” rather it

was left up to the discretion of the instructor receiving the waiver petition. In practice, in the period 1975-2007, 84% of waivers were given to students with survey grades of B or better. All of the students in the remaining 16% had survey grades of C or better. Since 1991, only two students were given waivers with survey grades lower than B, and both of those students received a grade of B-. In 1991, recognizing that students in the survey course represented a largely underutilized source of potential economics students, the department launched an aggressive marketing strategy in the survey course. This effort involves a formal announcement at the beginning and end of the course that survey students achieving a grade of B or higher could petition the department to have the macroeconomic principles requirement waived should they decide to major or minor in economics. At the end of the semester, a formal letter is sent from the department chair to high-performing survey students congratulating them on their performance, highlighting the practical advantages of the economics discipline, reminding them that the marginal cost of pursuing an economics degree would be lowered for them, and encouraging them to consider an economics degree. The general economics major is 33 credits and the economics minor is 18 credits. As measured by credits, the waiver policy lowers the cost of pursuing an economics major or minor, by 9% and 17%, respectively. Since the beginning of this effort, an average of 30 letters has been sent out at the end of each semester to targeted students.

### The Trend in Economics Degrees

One of the difficulties in conducting empirical institutional research in a small university is sample size. The analysis in this paper, while not unaffected by sample size issues, has the advantage of examining student transcript data over the past 33 years. Over that span, sufficient information has been collected from student transcripts to gain insight into the characteristics of students who have availed themselves of the waiver policy, and perhaps to offer suggestions to other small economics departments that are contending with issues of enrollment and gender balance. Unless otherwise noted, both minors and majors are included in economics degrees conferred.

Figure 1 shows the number of economics degrees conferred by UW-Parkside between 1975 and 2007. The bar graph is delineated by the number of students who initiated their economics studies with the introductory survey course and those that took the traditional micro-macro sequence (left vertical axis.) The solid line tracks the percentage of economics graduates who are female (right vertical axis.) Over the 33-year period, a total of 602 economics degrees were conferred. The trend in UW-Parkside



economics degrees generally conforms to the national trend, that is, an increasing number of degrees through the 1980s, peaking in the early-1990s, and then declining throughout most of the 1990s, with a slight but noticeable improvement in the 2000s (Siegfried and Scott, 1994; Siegfried, 2007). The data

suggest that the department's more aggressive marketing of the waiver, which began in 1991, *may* have had a positive impact on the number of survey students choosing the economics degree. In the twenty-year period between 1975 and 1994, 53 students came to the economics program through the survey course, or 12.4% of all economics degrees conferred during that period. In the thirteen year period beginning in 1995, or four years after the department began its aggressive marketing, 52 students, or 30.1% of all economics degrees were awarded to students who initiated their economics studies with the survey course. While the percentage of economics graduates who are female exhibits large fluctuations over time, it has tended to be higher in more recent years. In the period 1975-1994, 26.3% of economics graduates were female, but in the period 1995-2007 the percentage female among economics graduates increased to 40.5%.

### The Performance of Waived Students

The original intent of the waiver policy was to exploit an often neglected pool of students, those taking the introductory course for non-majors, with the expectation of increasing the number economics majors/minors. Informal conversations with students who entered the economics program through the survey course have convinced the economics faculty that the waiver policy has indeed been effective in attracting students who otherwise would not have pursued an economics degree. However, lacking a counterfactual or comparison group, a formal test of the effectiveness of the waiver policy in increasing awarded degrees is not possible. Instead, the analysis in this section explores a more modest question: By waiving the macroeconomic principles requirement, has the policy placed students at a disadvantage in subsequent upper-level economics courses?

We utilize information obtained from the transcripts of all 602 students awarded an economics degree during the 1975–2007 period. Students were segmented into three groups: “*traditional*” students who completed the micro-macro principles sequence as their entry into the economics program; “*waiver*” students who first completed the survey course and then were granted a waiver for the macro principles course; and “*non-waiver*” students who first completed the survey course, did not petition the department for a waiver, but instead went on to take the macro principles course. Of the 105 students who came to the economics program through the survey course, 51 availed themselves of the waiver opportunity. The remaining 54 survey students were either not high-performing, and therefore were not eligible for a waiver, or they voluntarily enrolled in macro principles. Of particular interest is whether the academic performance of the *waiver* students in subsequent economics courses was adversely impacted by the lack of higher-level foundations that would have been learned in macro principles.

Table 1 contains a comparison of the three groups, by gender, across the following variables: mean grade earned in macro and micro principles, intermediate macro theory, money and banking, mean GPA in all economics courses, and overall GPA. Course grades and GPA are based on a standard 4-point scale, A=4, A-=3.67, B+=3.33, etc. Only grades for courses actually taken at UW-Parkside are recorded. Each cell indicates the number of students in that category. The number of students can vary within a group because: (1) some courses may have been transferred in from other institutions; (2) the money and banking course is an elective; or (3) students minoring in economics are required to take only one intermediate theory class. Two levels of comparison were made. First, comparisons within gender were made for students entering the economics discipline through the survey course (*waiver* and *non-waiver*) against mean values for students taking the traditional micro-macro sequence (*traditional*). For example, the mean intermediate macro theory grade for women who received the macro waiver (*waiver*) was compared against the mean intermediate macro theory grade for women in the traditional micro-macro sequence (*traditional*). Second, gender comparisons were made within groups. For example, within the *waiver* group, the mean intermediate macro theory grade for men and women were compared. For simplicity of notation, only a one-tail  $\alpha=0.10$  level of significance was used for comparisons across groups (a) and within groups (b).

A few gender differences are evident in Table 1. In the *non-waiver* group, women entering the economics program through the survey course—but *not* receiving the macro principles waiver—had a significantly higher mean grade than men in the survey course. For *non-waiver* students, a relatively low survey grade is to be expected because the waiver policy is made available only to high-performing students. Somewhat surprising, however, is that the mean survey grade for women in the *non-waiver*

**Table 1**  
**Economics Student Performance: Mean GPAs, 1975-2007\***

<i>Survey</i>	<u><i>Traditional</i></u>		<u><i>Waiver</i></u>		<u><i>Non-Waiver</i></u>	
	<i>M</i>	<i>W</i>	<i>M</i>	<i>W</i>	<i>M</i>	<i>W</i>
			3.39	3.53	2.82	3.43 <sup>b</sup>
			0.68	0.66	0.68	0.74
			n=31	n=20	n=40	n=14
<i>Macro Principles</i>	3.19	3.23			3.25	3.38
	0.72	0.75			0.63	0.68
	n=283	n=126			n=36	n=14
<i>Micro Principles</i>	3.07	3.12	3.06	3.25	3.14	3.21
	0.75	0.81	0.79	0.71	0.73	0.62
	n=288	n=124	n=31	n=20	n=38	n=14
<i>Intermediate Macro</i>	2.97	2.94	2.76	2.98	3.00	3.05
	0.87	0.97	0.81	0.84	0.82	0.80
	n=289	n=116	n=29	n=17	n=34	n=13
<i>Money &amp; Banking</i>	2.89	2.96	2.85	3.00	2.95	2.78
	0.91	0.87	0.91	0.84	0.78	1.16
	n=239	n=109	n=20	n=13	n=28	n=12
<i>Econ GPA</i>	2.70	2.77	2.61	2.69	2.78	2.70
	0.57	0.67	0.58	0.46	0.55	0.49
	n=348	n=149	n=31	n=20	n=40	n=14
<i>Overall GPA</i>	2.98	3.13 <sup>b</sup>	2.86 <sup>a</sup>	3.25 <sup>b</sup>	2.87 <sup>a</sup>	3.21 <sup>b</sup>
	0.47	0.50	0.50	0.51	0.35	0.46
	n=348	n=149	n=31	n=20	n=40	n=14
<i>Group N</i>	n=497		n=51		n=54	
<i>% Women</i>	30.1 %		39.2 %		25.9 %	

\*Standard deviations appear beneath means. <sup>a, b</sup> refer to one-tail statistical significance  $\alpha = 0.10$ , across groups and within groups, respectively.

group was nearly as high as the mean survey grade for women in the *waiver* group. Women in the *non-waiver* group may have been generally more cautious and/or less confident that their high performance in the survey course would translate into success in upper-level economics courses without the macroeconomics principles course. Within each group, women registered statistically significant higher overall GPAs than men.

Across groups, only the overall GPA for men registered any statistically significant differences, with men in the *waiver* and *non-waiver* groups achieving lower scores than their counterparts in the *traditional* group. For macro principles, both men and women in the *non-waiver* group, having already been exposed to macroeconomic topics in the survey course, did marginally better than their counterparts in the *traditional* group, though the difference was not statistically significant. The striking feature about group comparisons in Table 1, with the exception of overall GPA, is that none of the mean values in *waiver* and

*non-waiver* groups are statistically different from the corresponding values in the *traditional* group. Students in the *waiver* group virtually matched the performance of *traditional* students in micro principles, intermediate macro theory, money and banking, and all other economics courses. Finally, the percent of women in the *waiver* and *non-waiver* groups is approximately the same as the *traditional* group (32.4% vs. 30.1%), and is close to the most recent national average, 31.0%, reported by Siegfried (2007).

### Performance in Upper-Level Macro Courses

This section contains a more detail analysis of *waiver* students' performance in intermediate macro theory, and money and banking. An OLS model explaining student performance in these two courses was estimated in order to incorporate control variables. Students' course grades in these two upper-level macro courses were estimated as a function of overall cumulative GPA (*overall gpa*), which could be viewed as a rough measure of overall student ability/effort; grade in macro principles (*macro prin grade*); and dummy variables identifying female students (*female*), and students who received the macro principles waiver (*waiver*). If students received a waiver, then their survey grade was substituted for their missing macro principles grade. Table 3 contains the OLS results. After controlling for student ability/effort (*overall gpa*), which understandably had the strongest effect on upper-level macro performance, students who received a waiver performed as well as students who took the macro principles course. The coefficients on *waiver* in both equations are small and statistically insignificant. The sign on macro principles grade is positive in both equations, but statistically significant (marginally) only in the intermediate macro theory equation. The impact of gender in both equations is negative, and while it is statistically significant, the magnitude is relatively small, less than 18% of a grade point. The OLS results in Table 2 and the means reported in Table 1 suggest that the macro principles waiver has *not* hindered student performance in subsequent economics courses.

### Marketing to Survey Students 1995-2007

The trend in UW-Parkside economics degrees shown in Figure 1 suggests that the department's more overt and deliberate effort to market the economics program to survey students *may* have been successful. The percentage of all economics degrees awarded to students who entered economics through the survey class increased from 12.4% in 1975-1994, to 30.1% in 1995-2007. In addition to an increase in degrees awarded to survey students, Figure 1 shows an increase in the percentage of degrees awarded to women in the post-marketing period. The percentage of degrees awarded to women increased from 26.3% in 1975-1994 to 40.5% in 1995-2007.

While the department would like to attribute the increase to its marketing efforts, a possible explanation for this finding is that some students were "gaming" the policy. The micro-macro sequence is required for both the economics and business majors. Theoretically, students intending to major in economics or business could take the survey course for non-majors and have the macro principles requirement waived, thereby thwarting the purpose of the policy by granting waivers to students who would have majored in economics/business in any case. Presumably, the motivation for gaming the policy in this fashion would be to avoid taking macro principles, which could be perceived as more challenging, and therefore more costly, than the survey course. For several reasons, department faculty believe that if gaming the policy has occurred at all, the magnitude of the effect is likely very small. First, informal conversations with students who obtained the waiver strongly suggest that these are students who had no intention of pursuing an economics degree. Second, a student contemplating this strategy would have to: (a) be aware of the waiver at the time of registration – most students are not; (b) have not already taken microeconomic principles – otherwise they would not be allowed to register for the survey class; (c) conceal their intentions for their course of study from their advisor; (d) be confident of receiving at least a B in the course – otherwise the waiver would not be granted; and (e) be confident (or indifferent) that the waiver would not academically disadvantage them in subsequent economics courses. Third, the department has virtually eliminated the possibility of this strategy among business majors by adopting the policy of not granting a waiver until an intermediate theory course has been successfully completed.

**Table 2**  
**Determinants of Performance in Upper-Level Macro Courses**

Variable	Intermediate Macro Theory	Money and Banking
<i>Constant</i>	-0.667 (0.205) <sup>a</sup>	-0.902 (0.218) <sup>a</sup>
<i>overall gpa</i>	1.124 (0.094) <sup>a</sup>	1.239 (0.094) <sup>a</sup>
<i>macro prin grade</i>	0.096 (0.070) <sup>c</sup>	0.040 (0.069)
<i>waiver</i>	-0.039 (0.078)	0.039 (0.086)
<i>female</i>	-0.171 (0.074) <sup>b</sup>	-0.158 (0.077) <sup>b</sup>
<b><math>\bar{R}^2</math></b>	0.413	0.451
<i>N</i>	436	356

<sup>a, b, c</sup> statistically significant at  $\alpha = 0.01, 0.05, 0.10$ , respectively, one-tail test. White heteroskedasticity-consistent standard errors appear in parentheses.

As in the question of the overall efficacy of the waiver policy to increase the number of economic degrees awarded, we are not able to formally test the effectiveness of the department's marketing effort because of data limitations. Nevertheless, approximately four years after the campaign was put into effect both the number and the percentage of degrees conferred to students taking the survey course increased, and this effect was particularly strong for women. Informal data received from *waiver* students, often unsolicited, has suggested that the marketing effort has had its intended effect. Nevertheless, there may be confounding factors that limit the ability to formally ascribe post-1995 effects to the marketing strategy. For example, the analysis is unable to control for any increased requirements in other disciplines that may have *pushed* students toward economics. In addition, even if controls were included, it would be difficult to disentangle the effect of the waiver, per se, from other aspects of the marketing effort. While students who obtained the waiver have indeed indicated that it was a factor in their decision, perhaps the increase was due to the letter of congratulations and encouragement sent by the chair of the department at the completion of the semester.

The statistics in Table 3 take a closer look at student characteristics during the post-marketing period; it contains the same categories of information as Table 1, but isolates the period 1995-2007, or four years after the marketing effort began. Generally, the conclusions reached in the previous section regarding the relative performance of students obtaining the macro waiver apply to students receiving their degrees in the more recent thirteen year period, with some notable exceptions. First, women in the *waiver* group were not disadvantaged by the macro principles waiver. On the contrary, though statistically significant only for money and banking and overall GPA, women in the *waiver* group *outperformed* women in the *traditional* group in every category. Women in the *non-waiver* group also outperformed women in the *traditional* group. Second, not only did women in the *waiver* and *non-waiver* groups achieve higher grades than women in the *traditional* group, they equaled or outperformed men in the *traditional* group as well, though mean differences were not statistically significant. Thus, over the thirteen year period, women who initiated their economics degree through the survey course, whether they received a waiver or not, were responsible

for increasing the overall mean GPA in the economics program. This result is particularly noteworthy because, within the *traditional* group, men outperformed women in every category except overall GPA. Third, this pattern is distinctly different for men in the *waiver* and *non-waiver* groups. Men entering the economics program through the survey course, waived or not, had *lower* mean grades in every category relative to their male counterparts in the *traditional* group. Though statistically significant only for overall GPA, this nevertheless suggests that the survey course path to the economics degree attracts a different quality of student by gender.

### “Otherwise Bright” Students

In his most recent accounting of economics degrees conferred nationally, Siegfried (2007) reported that the percentage of degrees awarded to women has declined slightly, from 34.4% in 2000 to 31.0% in 2006. The decline is particularly troubling considering that the percentage of all bachelor’s degrees conferred to women rose during this same period, 57.2% to 59.0%. Nationally, economics is not attracting its share of the larger pool of women undergraduates. The UW-Parkside economics department is doing somewhat better in attracting women to the discipline. In Table 3, of the 173 economics degrees conferred 1995-2007, 70 were received by women, or 40.5%. However, the relatively good performance of the UW-Parkside economics program in attracting women is due almost entirely to female students entering the program through the survey course. The *traditional* group consisted of only 34.7% women, very similar to the national average, while in the waiver and non-waiver groups, 53.8% were women. In order to more closely conform to Siegfried’s analysis that considered economics majors only, economics minors were omitted, but the results were virtually the same. In the 1995-2007 period, of students who began the economics major with the survey course, 54.0% were women, while the traditional micro-macro path to the major yielded 29.3% women. Likewise, the academic performance of female economics majors who began with the survey course (*waiver* and *non-waiver*) surpassed that of all other groups. Female majors in the survey group had a higher economics GPA (2.75) than male majors in the economics survey group (2.43), and higher than male and female traditional majors, 2.55 and 2.56, respectively.

Thus, the survey course itself, and perhaps the waiver policy and marketing effort, have helped the department garner its share of women undergraduates. Other economics departments interested in improving gender balance within their undergraduate majors/minors may want to consider a more aggressive appeal to students taking their introductory course for non-majors. Unlike the traditional micro and macro principles courses, the survey course is more likely to reflect the gender mix for the entire university. For example, the undergraduate degree seeking student body at UW-Parkside is approximately 55% female. In the past five years, the percentage female in the micro and macro principles course has been 40.3%, while for the survey course it was 52.3%. Thus, if indeed the department’s marketing effort to survey students was successful, it did *not* have a larger impact on women. Rather, of students entering the economics program through the survey course, 53.8% were women, roughly proportional to their representation in the survey course (52.3%).

Another contribution survey students have made to the program, though harder to quantify, is that they offer a more diverse and broader liberal arts academic background. Of the 121 students in the *traditional* group during the 1995-2007 period, 32.2% were economics minors, and 74.3% of those economics minors had a business major. As might be expected given the complementarity of the subject matter and the overlap in degree requirements, there is a strong relationship between the economics and business programs among students who began their economics studies with the traditional micro-macro sequence. In contrast, of the 52 students in the survey group (*waiver* and *non-waiver*), 23.7% were economics minors, and only 14.3% of those minors had a business major. Thus, among all students who chose economics as a minor, survey students were much less likely to have majored in business. The percentage of economics majors who earned a minor or second major in business was similar for the two groups, 19.5% for the *traditional* group, and 23.7% for survey students (*waiver* and *non-waiver*). While this too is to be expected given the exclusivity of the survey course, it nevertheless underscores an added dimension of what survey students contribute to the economics program. Whether survey students have majored, for example, in political science, international studies, or geosciences, they bring to the economics classroom a more diverse perspective that can only enrich discussion.



**Table 3**  
**Economics Student Performance: Mean GPAs, 1995-2007\***

	<u>Traditional</u>		<u>Waiver</u>		<u>Non-Waiver</u>	
	<i>M</i>	<i>W</i>	<i>M</i>	<i>W</i>	<i>M</i>	<i>W</i>
<i>Survey</i>			3.52 0.52 n=14	3.70 <sup>b</sup> 0.43 n=18	2.70 0.92 n=10	3.63 <sup>b</sup> 0.58 n=10
<i>Macro Principles</i>	3.22 0.77 n=62	3.20 0.84 n=28			3.29 0.41 n=8	3.40 0.73 n=10
<i>Micro Principles</i>	3.22 0.77 n=62	3.20 0.84 n=28	3.12 0.76 n=14	3.35 0.66 n=18	2.89 0.76 n=9	3.27 0.54 n=10
<i>Intermediate Macro</i>	3.06 0.82 n=72	2.87 0.96 n=32	2.81 0.77 n=14	3.11 0.71 n=15	2.96 0.57 n=8	3.11 0.87 n=9
<i>Money &amp; Banking</i>	3.04 0.93 n=60	2.78 0.84 n=29	2.77 0.90 n=10	3.18 <sup>a</sup> 0.78 n=11	2.62 0.97 n=7	3.04 1.05 n=8
<i>Econ GPA</i>	2.62 0.54 n=79	2.58 0.68 n=42	2.50 0.57 n=14	2.75 <sup>b</sup> 0.43 n=18	2.46 0.49 n=10	2.71 0.53 n=10
<i>Overall GPA</i>	3.16 0.48 n=79	3.17 0.46 n=42	2.90 <sup>a</sup> 0.45 n=14	3.35 <sup>a, b</sup> 0.41 n=18	2.82 <sup>a</sup> 0.32 n=10	3.29 <sup>b</sup> 0.44 n=10
<i>Group N</i>	n=121		n=32		n=20	
<i>% Women</i>	34.7 %		56.2 %		50.0 %	

\*Standard deviations appear beneath means. <sup>a, b</sup> refer to one-tail statistical significance  $\alpha=0.10$ , across groups and within groups, respectively.

### Conclusion

This paper has reported on the characteristics of a departmental administrative policy targeting students in the introductory economics survey course for non-majors. High-performing survey students were offered a waiver from the macro principles requirement if they decided to pursue an economics degree. In addition, beginning in 1991 an aggressive marketing effort targeting survey students was undertaken. The intent of the waiver policy and marketing effort was to increase the number of economics degrees awarded by lowering the cost of pursuing the degree to students who were likely not considering economics as a course of study before they enrolled in the survey course. Because of the lack of a counterfactual or controlling variables, a formal test of the policy's impact was not possible. However, an analysis of student transcript data spanning 33 years was able to offer insight into the characteristics of students who entered the economics program through the survey course for non-majors. Students receiving

a waiver were not disadvantaged in subsequent economics courses. Most important, the analysis strongly suggests that the “otherwise bright” women entering the program through the survey course have improved the department’s gender balance and have enhanced the overall academic performance of students in the economics program. Whether the department’s policy and marketing effort are entirely responsible for this effect is difficult to determine. However, both the policy and the marketing effort have been low cost initiatives, and in small economics departments granting even two or three additional degrees per year would be considered a significant benefit. At the same time, if the additional degrees were granted primarily to “otherwise bright” women, then the program would have the added benefit of improved academic performance and gender balance.

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