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**Rotary District 7690 Relative Membership Growth Potential Analysis
by County**

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This brief applies a simple framework for assessing the relative potential for Rotary membership growth in different geographic areas. The analysis is relative in that areas are compared to each other through an econometric procedure. By design about half of the areas are considered as performing comparatively well in that they have membership rates above expectations. The other areas are considered as performing less well because they have membership rates below expectations, and thereby more potential for growth. The simulations entail assessing how much membership growth could be achieved by raising the performance of less well performing areas to their expected levels of performance. That is, relative membership potential gains are estimated by raising the performance of less well performing areas to the average performance in zone 33 as a whole, taking into account the fact that expected membership rates differ between areas. The analysis is conducted for Rotary zone 33 as a whole, which covers part of the Mid Atlantic and South Atlantic regions of the United States, but the results provided in this brief are for 14 geographic areas within district 7690, which covers parts of North Carolina. The results suggest that district 7690 has an average Rotary membership rate, but with substantial potential for membership growth.

Introduction

Membership growth is a priority for many Rotary districts, especially in the United States. This is also the case for district 7690, which covers parts of North Carolina. In 2010, the year for which the analysis in this brief is conducted, the district had 52 clubs and 2,834 Rotarians.

This brief does not discuss how membership growth could be achieved. But it does suggest a framework to identify geographic areas that could be targeted by the district leadership team for growth. Targeting specific areas for growth is likely to be beneficial. Indeed, Rotary districts cover large geographic areas and the resources available to leadership teams for recruiting and

retaining new members are limited. It therefore makes sense to focus efforts on areas where the potential for higher membership is likely to be largest.

The approach used in this district to identify areas with potential for membership growth is very simple. Membership rates in Rotary are estimated by comparing the number of Rotarians in an area to the number of high income households in that area. Next, expected membership rates are estimated on the basis of data for zone 33 as a whole. The difference between actual and expected membership rate together with the number of high income households in an area are then used to assess the potential for growth by area.

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This brief presents a simple approach to measure how different areas are doing in terms of Rotary membership and where the potential for higher membership may be largest. The approach is applied to district 7690.

The brief is structured as follows. The next section describes the methodology used for measuring membership rates. In the following two sections, results are provided for district 7690 for current and potential membership rates. The last two sections discuss the magnitude of the potential membership gains that could be achieved in district 7690 and the potential contribution of the district to membership growth in zone 33. A conclusion follows.

Methodology

Rotary membership potential brief 2012/1 in this series discusses the methodology adopted for the analysis, and more details are available in Wodon (2012). This section summarizes very briefly the main features of the methodology.

An area's membership rate (denoted by MR) is defined as the number of Rotarians in the area divided by the area's number of high income households. For all areas in zone 33, the income threshold to qualify as a high income household is \$100,000, with the exception of districts 7610 and 7620 where the threshold has been set at \$150,000, in large part because of a higher cost of living in those areas.

The analysis is carried at the level of counties and other similar independent administrative entities within each

Rotary district, because carrying the analysis at lower levels such as that of zip codes would not yield reliable results (see Membership potential brief 2012/1 for the reasons that led to this choice).

Membership data for zone 33 suggest that there is a strong negative relationship between membership rates and the number of high income households in an area. Areas with many high income households tend to have much lower membership rates. Several hypotheses could be advanced for explaining this relationship. In areas with a many high income households, work pressures and time availability to participate in Rotary may be more constrained, the prestige associated with being a member of Rotary may be lower, and the opportunities to be involved in service work through other organizations may be more numerous. Whatever the underlying causes of this negative relationship, it should not be ignored because it is not reasonable to expect that areas with many high income households will be able to reach the same membership rates as areas with fewer high income households. For this reason, expected membership rates are estimated for all areas within zone 33. The simulations provided in this brief rely on the differences between actual and expected membership rates by area.

Membership Rates

Table 1 provides data on the number of geographic areas (typically counties), clubs, and Rotarians in each of the 15 districts in zone 33. The table also displays the number of high income households (HIH) by district as obtained from the American Community Survey and the resulting membership rates.

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According to the Census Bureau, district 7690 had a total of 100,065 households with yearly income above US\$100,000 (estimates for 2005-2009). The district accounts for a small share of high income households in zone 33 (5.4%), and a similar share of the Rotary membership in the zone (7.8%) (2,834 Rotarians out of a total of 36,539).

District 7690 accounts for 5.4% of high income households, and 7.8% of Rotarians in zone 33. Its membership rate is 2.8%, which is also the average in all districts in zone 33.

Table 1: Membership Rates by District in Zone 33, 2010

| District | Areas | Clubs | HIH | Mem. | R (%) |
|----------|-------|-------|---------|-------|-------|
| 7530 | 19 | 30 | 25878 | 1147 | 4.4% |
| 7550 | 16 | 28 | 30952 | 1279 | 4.1% |
| 7570 | 38 | 84 | 91124 | 3701 | 4.1% |
| 7600 | 31 | 64 | 228711 | 2962 | 1.3% |
| 7610 | 23 | 53 | 235567 | 2177 | 0.9% |
| 7620 | 13 | 67 | 323161 | 2480 | 0.8% |
| 7630 | 11 | 39 | 110503 | 1688 | 1.5% |
| 7670 | 20 | 53 | 52303 | 2581 | 4.9% |
| 7680 | 14 | 53 | 148138 | 2941 | 2.0% |
| 7690 | 15 | 52 | 100065 | 2834 | 2.8% |
| 7710 | 10 | 44 | 143939 | 1847 | 1.3% |
| 7720 | 22 | 44 | 42815 | 1683 | 3.9% |
| 7730 | 14 | 51 | 60323 | 2032 | 3.4% |
| 7750 | 19 | 54 | 107707 | 2889 | 2.7% |
| 7770 | 24 | 79 | 138279 | 4298 | 3.1% |
| Mean | 19 | 53 | 122631 | 2436 | 2.8% |
| Sum | 289 | 795 | 1839465 | 36539 | - |

Source: Author

The district membership rate was 2.8% as of July 2010, which is also the average rate across the 15 districts. Because of the negative relationship mentioned earlier between membership rates and the number of high income households in an area, the fact that district 7690 has an average membership rate does not necessarily imply that it also has an average performance in

attracting Rotarians. The potential for attracting new Rotarians in the district may well be significant.

Table 2 provides data on membership rates for the counties in the district. Membership rates vary from 0.9% in Chatham County to 6.4% in Surry County, with an average rate of 2.9% across areas (this average is not the same as the district membership rate). Of the 14 areas, nine have membership rates below three percent. Guilford County is the area with the largest number of Rotarians, at 934, and also the area with the largest numbers of clubs. It has a membership rate of 2.9%. The area with the smallest membership is Caswell County, with 10 Rotarians in a single club and a membership rate of 2.1%.

Within district 7690, membership rates vary from 0.9% in Chatham County to 6.4% in Surry County. The average membership rate across geographic areas is 2.9%.

Table 2: Membership Rates by County in District 7690, 2010

| Area (County) | Clubs | HIHs | Mem. | R (%) |
|---------------|-------|--------|------|-------|
| Alamance | 4 | 7037 | 127 | 1.8% |
| Caswell | 1 | 477 | 10 | 2.1% |
| Chatham | 1 | 4851 | 43 | 0.9% |
| Davidson | 2 | 6845 | 90 | 1.3% |
| Davie | 2 | 2951 | 70 | 2.4% |
| Forsyth | 6 | 23533 | 675 | 2.9% |
| Guilford | 13 | 32104 | 934 | 2.9% |
| Lee | 3 | 2817 | 91 | 3.2% |
| Montgomery | 1 | 856 | 27 | 3.2% |
| Moore | 4 | 4577 | 181 | 4.0% |
| Randolph | 5 | 5124 | 232 | 4.5% |
| Rockingham | 4 | 3242 | 134 | 4.1% |
| Stokes | 2 | 1634 | 32 | 2.0% |
| Surry | 3 | 2590 | 165 | 6.4% |
| Yadkin | 1 | 1427 | 23 | 1.6% |
| Mean | 3.5 | 6671 | 189 | 2.9% |
| Sum | 52 | 100065 | 2834 | - |

Source: Author.

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Expected Membership Rates

Regression analysis is used to estimate expected membership rates by area (see Rotary membership potential brief 2012/1, as well as Wodon (2012) for details). Next, simple simulations are conducted on the basis of the differences between current and expected membership rates by area.

Specifically, two simulations are implemented. In both simulations the areas that have a higher membership rate than the expected rate keep their membership rate (they continue to “over-perform”). The difference between the two simulations relates to the treatment of areas with membership rates below expected levels.

- (1) 100% gap reduction: This case assumes that all areas with lower membership rates than expected see their membership rate bumped up to the expected level.
- (2) 50% gap reduction: A more reasonable – but still ambitious – goal would be to reduce by half the gap between actual and expected membership for areas that have lower than expected membership rates. This is what is done in the second simulation.

Two simulations are carried for potential membership rates: (1) all areas with lower membership than expected see their membership rate reach the expected level; (2) only half of the gap between actual and expected membership is bridged for areas with lower than expected rates.

Table 3 reports the results of the two simulations for the counties and other entities in district 7690. Under the first scenario, the average membership rate across the areas would increase from 2.9% to 4.2% and the number of Rotarians in the district would reach 3,217. Under the second simulation the average membership rate across the counties increases from 2.9% to 3.5%, and the number of Rotarians in the district would reach 3,026. Even this second simulation may be optimistic given the decline in membership observed throughout the United States for some time. Therefore it could represent a medium term objective for the district.

Table 3: Potential Membership Rates by County in District 7690, 2010

| Area (County) | 100% gap reduction | | 50% gap Reduction | |
|---------------|--------------------|------|-------------------|------|
| | Mem. | R(%) | Mem. | R(%) |
| Alamance | 162 | 2.3% | 145 | 2.1% |
| Caswell | 39 | 8.1% | 24 | 5.1% |
| Chatham | 134 | 2.8% | 88 | 1.8% |
| Davidson | 160 | 2.3% | 125 | 1.8% |
| Davie | 103 | 3.5% | 86 | 2.9% |
| Forsyth | 675 | 2.9% | 675 | 2.9% |
| Guilford | 934 | 2.9% | 934 | 2.9% |
| Lee | 100 | 3.6% | 96 | 3.4% |
| Montgomery | 53 | 6.2% | 40 | 4.7% |
| Moore | 181 | 4.0% | 181 | 4.0% |
| Randolph | 232 | 4.5% | 232 | 4.5% |
| Rockingham | 134 | 4.1% | 134 | 4.1% |
| Stokes | 75 | 4.6% | 54 | 3.3% |
| Surry | 165 | 6.4% | 165 | 6.4% |
| Yadkin | 70 | 4.9% | 46 | 3.3% |
| Mean | 214 | 4.2% | 202 | 3.5% |
| Sum | 3217 | - | 3026 | - |

Source: Author

Another way to express the potential gains by county consists in computing realized membership rates by dividing the number of Rotarians in an area by the potential number of Rotarians under

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each of the two simulations. Districts with the lowest realized membership rates may well have the highest potential for growth. Realized membership rates can be computed under the two simulations. The realized membership rates are by definition lower when considering the 100% gap reduction than when considering the 50% reduction.

In the first simulation, the number of Rotarians in the district increases to 3,217. In the second, it reaches 3,026. Other simulations can readily be performed with the data provided.

Table 4: Realized Membership Rates by County in District 7690, 2010 (%)

| Area (County) | 100% gap reduction | 50% gap reduction |
|---------------|--------------------|-------------------|
| Alamance | 78.2% | 87.8% |
| Caswell | 25.9% | 41.1% |
| Chatham | 32.2% | 48.7% |
| Davidson | 56.3% | 72.0% |
| Davie | 68.0% | 81.0% |
| Forsyth | 100.0% | 100.0% |
| Guilford | 100.0% | 100.0% |
| Lee | 90.7% | 95.1% |
| Montgomery | 50.8% | 67.4% |
| Moore | 100.0% | 100.0% |
| Randolph | 100.0% | 100.0% |
| Rockingham | 100.0% | 100.0% |
| Stokes | 42.6% | 59.7% |
| Surry | 100.0% | 100.0% |
| Yadkin | 32.9% | 49.5% |
| Mean | 71.8% | 80.2% |

Source: Author.

The realized membership rates for areas within district 7690 are provided in table 4. For example, as a proportion of what could be achieved with a 50% gap reduction, the realized membership rates for the areas which are below their expected levels of membership range from 41.1% in Caswell County to 95.1% for Lee County. In six areas the realized membership rates are considered to be at

100% because those areas have a higher number of Rotarians than the expected level for their number of high income households.

In order to target areas for growth at the level of a district, one may combine the potential for increasing the membership rate and the size of the high income population. This is done in table 5 which provides the net gains in membership under the 50% simulation. Since estimates of the gains in membership are proportional to the gaps between actual and expected membership, it is straightforward to provide estimates for other targets. For example the gains under the 100% simulation would be twice those under the 50% simulation, and the gains under a 25% gap reduction would be half of those under the 50% gap reduction. Apart from providing expected gains in membership under the 50% gap reduction simulation, table 5 also ranks the counties in terms of the number of members gained (the ranks would be the same for any other proportional gap reduction simulation).

In district 7690, the top five contributors of new members under the gap reduction simulations would be Chatham, Davidson, Yadkin, Stokes, and Alamance counties. These areas are ranked higher in terms of potential membership gains because they typically combine a larger high income population with membership rates below expected rates. The six areas with a membership rate above the expected level do not contribute to membership gains under the simulations, but this does not mean of course that in reality there is no potential for growth there as well.

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In district 7690, the five areas with the largest number of new members might be Chatham, Davidson, Yadkin, Stokes, and Alamance counties.

Table 5: Potential Membership Gain by County in District 7690, 2010

| Area (County) | Gain with 50% gap Reduction | Area rank (largest to smallest) |
|---------------|-----------------------------|---------------------------------|
| Chatham | 45 | 1 |
| Davidson | 35 | 2 |
| Yadkin | 23 | 3 |
| Stokes | 22 | 4 |
| Alamance | 18 | 5 |
| Davie | 16 | 6 |
| Caswell | 14 | 7 |
| Montgomery | 13 | 8 |
| Lee | 5 | 9 |
| Forsyth | 0 | - |
| Guilford | 0 | - |
| Moore | 0 | - |
| Randolph | 0 | - |
| Rockingham | 0 | - |
| Surry | 0 | - |
| Sum | 192 | - |

Source: Author

Contribution to Zone Growth

To what extent would gains in district 7690 contribute to overall gains for zone 33 under the simulations presented in this brief? The answer to this question is provided in table 6. In the table, membership has been increased in all districts using the same simulations for counties with memberships below expectations and the results aggregated at the level of the districts (note that the district level average membership rate is not equal to the mean membership rate across counties in a district since these are not linear functions but ratios). Membership in the zone could increase to 47,436 under the first simulation, and 43,205 under the second simulation.

From a base of 36,539, zone 33 membership could increase to 47,436 under the first simulation, and 43,205 under the second. District 7690 would account for 4.5% of zone growth.

Finally, table 7 provides the realized membership rates for each of the districts in the zone under the two simulations, as well as the gain in membership that would be obtained. Under the 50% gap reduction simulation, the additional 192 members in district 7690 would represent 4.5% of the membership growth for the zone (this proportion is by construction the same for the 100% gap reduction). With its average membership rate in comparison to the expected rate, and a limited high income population, district 7690 would contribute to growth in the zone in a proportion that would be below its current membership share.

Table 6: Potential Membership Rates by District in Zone 33, 2010

| District | 50% gap reduction | | 100% gap reduction | |
|----------|-------------------|------|--------------------|------|
| | Mem. | Rate | Mem. | Rate |
| 7530 | 1236 | 4.8% | 1325 | 5.1% |
| 7550 | 1425 | 4.6% | 1570 | 5.1% |
| 7570 | 4005 | 4.4% | 4310 | 4.7% |
| 7600 | 3846 | 1.7% | 4729 | 2.1% |
| 7610 | 2736 | 1.2% | 3296 | 1.4% |
| 7620 | 3232 | 1.0% | 3984 | 1.2% |
| 7630 | 1910 | 1.7% | 2132 | 1.9% |
| 7670 | 2658 | 5.1% | 2735 | 5.2% |
| 7680 | 2982 | 2.0% | 3023 | 2.0% |
| 7690 | 3026 | 3.0% | 3217 | 3.2% |
| 7710 | 2005 | 1.4% | 2163 | 1.5% |
| 7720 | 1828 | 4.3% | 1974 | 4.6% |
| 7730 | 2135 | 3.5% | 2237 | 3.7% |
| 7750 | 3016 | 2.8% | 3143 | 2.9% |
| 7770 | 4465 | 3.2% | 4632 | 3.3% |
| Mean | 2700 | 3.0% | 2965 | 3.2% |
| Sum | 43205 | | 47436 | |

Source: Author

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Conclusion

This brief has presented the results of a membership potential analysis for Rotary district 7690 by geographic area. The district has one of the highest membership rates in zone 33 in part because it includes few areas with a large number of high income households, and because membership rates tend to be higher in such areas. Still, the analysis suggests that there is potential for growth in the district, with the top five areas for growth likely to be Chatham, Davidson, Yadkin, Stokes, and Alamance counties.

Table 7: Realized Membership Rates and Potential Membership Gain by District in Zone 33, 2010

| District | 50% gap reduction | | 100% gap reduction | |
|----------|-------------------|---------|--------------------|---------|
| | Potential Gain | RMR (%) | Potential Gain | RMR (%) |
| 7530 | 89 | 92.8% | 178 | 86.5% |
| 7550 | 146 | 89.8% | 291 | 81.4% |
| 7570 | 304 | 92.4% | 609 | 85.9% |
| 7600 | 884 | 77.0% | 1767 | 62.6% |
| 7610 | 559 | 79.6% | 1119 | 66.1% |
| 7620 | 752 | 76.7% | 1504 | 62.2% |
| 7630 | 222 | 88.4% | 444 | 79.2% |
| 7670 | 77 | 97.1% | 154 | 94.4% |
| 7680 | 41 | 98.6% | 82 | 97.3% |
| 7690 | 192 | 93.7% | 383 | 88.1% |
| 7710 | 158 | 92.1% | 316 | 85.4% |
| 7720 | 145 | 92.0% | 291 | 85.3% |
| 7730 | 103 | 95.2% | 205 | 90.8% |
| 7750 | 127 | 95.8% | 254 | 91.9% |
| 7770 | 167 | 96.3% | 334 | 92.8% |
| Mean | 264 | 90.5% | 529 | 83.3% |
| Sum | 4230 | | 8461 | |

Source: Author

These results should be considered as indicative only given that alternative modeling approaches could have been used for assessing membership growth potential and would have yielded different results. Still, it is hoped that

the analysis will be of some value for District officials developing strategies for membership growth.

Reference

Wodon, Q., 2013. *Estimating the Potential for Membership Growth in Service Clubs: Framework and Application to Rotary*, Washington, DC: The Nonprofit Research Project.

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The author is a member of the Rotary Club of Washington, DC. The opinions expressed in this brief are those of the author only and need not reflect those of the author's Rotary club, district, zone, or Rotary International. This idea behind this brief and the other membership potential briefs prepared for the districts in zone 33 emerged from discussions with Bob Parkinson, District Governor of Rotary district 7620 for 2012-13, and Peter Kyle, District Governor Elect. Any mistakes or omissions remain however solely the responsibility of the author.

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