

Application of the Pareto Principle to Participation in Christian Churches

Paul A. Stock, PhD

McLane College of Business
University of Mary Hardin-Baylor Belton
TX 76513, USA

Eileen M. Stock, PhD

VA Maryland Health Care System
Perry Point, MD 21902
USA

Abstract

The Christian church has always encouraged participation of its members. The success of any church depends on how inclined its members are to volunteer their time and effort. This study aims to determine how church participation in Christian churches relates to the Pareto Principle. The Pareto Principle is an economic theory stating that roughly 80% of results come from 20% of causes. Of 166 Christian church leaders surveyed, 78.9% believe participation follows the Pareto Principle, meaning 80% of total participation is performed by 20% of the members. An extension study was conducted to determine if there was a difference among rural versus urban churches. Comparing churches in rural versus urban communities, no difference was found. Although a majority (56.6%) of church leaders in the extension study felt the Pareto Principle applied, this represented a 28.3% reduction from the previously reported 78.9%, demonstrating the impact COVID-19 has had on church participation.

Keywords: Pareto Principle, congregational participation, Christian church

1. Application of the Pareto Principle to Participation in Christian Churches

1.1 Introduction. Active participation is critical to the success of any church. Church leaders have known this to be true for over 100 years. In fact, Pope Pius X wrote in 1903 that active participation was the first source of the true Christian spirit (Salisbury, 2021). Church members should be engaged to accomplish the church's mission. However, a growing concern is that too many Christians find a church they like and then sit passively in the back row. If the congregation is not actively engaged, the church's mission will fail (Nieuwhof, 2022).

Disclosures: The views and opinions expressed herein are those of the authors and do not necessarily represent that of the U.S. Department of Veterans Affairs or the U.S. government. The authors have no other conflicts of interest.

Previous presentation: This work was presented at the American Association of Behavioral and Social Sciences (AABSS) conference 2022.

1.2 Recent Trends. In recent years, there has been a decline in church participation. In fact, a Gallup poll conducted in 2020 reported that church membership in the United States fell below 50 percent for the first time in the 80 years of polling data. In 2020, just 47% of Americans belonged to a church or place of worship. This is a significant drop from 1999, when 70% of Americans were members of a church. One factor driving this trend is an increase in the number of Americans who express no religious preference. (Jones, 2021).

1.3 The Pandemic. The COVID-19 pandemic added yet another challenge for church leaders. In fact, one study found that one-in-three practicing Christians dropped out of church completely during the COVID-19 pandemic (Wang, 2022). The fear of virus infection, severe illness, and even death prevented many church members from attending Church services in-person and participating in church activities.

1.4 The Pareto Principle. The relationship between church membership and active participation in church activities is not well understood. While there tends to be a natural ratio between results and causes, the extent to which this applies to participation in church activities is unknown. An Italian economist named Vilfredo Pareto first realized this natural ratio in 1896 when he found that 80% of the land in Italy was owned by only 20% of the population. Soon after, he realized that 80% of the peas in his garden were produced by only 20% of the plants (Laoyan, 2021). This natural ratio was later named the Pareto Principle, which has also been referred to as the 80/20 Rule and the “law of the vital few”. Pareto, and other researchers who followed his initial research, discovered that this 80% to 20% ratio was present in many other situations. In fact, this natural ratio is still being discovered in new applications. For example, Toyota recently discovered that 20% of a vehicle’s carbon footprint occurs during production and the other 80% occurs during the vehicle’s use (Reclaim, 2021). Although the Pareto Principle has been applied to many different areas, whether the Pareto Principle extends to church participation is not known.

1.5 Purpose of the Study. In this study, we wanted to know more about the current level of church participation as it relates to the Pareto Principle. Specifically, we wanted to know if church participation follows the Pareto Principle. When applied to church participation, the Pareto Principle would predict that about 80% of active participation in church activities is performed by about 20% of the church members. We further assess the application of the Pareto Principle to church participation among rural versus urban churches.

2. Methods

2.1 Sample and Study Design. To determine the role of the Pareto Principle in church participation by its members, we administered a survey to Christian church leaders located in central Texas, comprising the counties of Bell, Coryell, Falls, Lampasas, McLennan, Milam, and Williamson. Surveys were mailed to leaders of 437 Christian churches in central Texas identified from church registries between September 2018 and May 2019 along with a self-addressed stamped envelope for return of completed surveys.

We further extended this study to Christian church leaders in the entire state of Texas, with the aim of comparing survey results from churches in rural versus urban communities. For the extension study, surveys were randomly mailed to the leaders of 219 Christian churches located in the state of Texas. Churches were considered rural if they were located in towns with a population of less than 2,500 and urban if located in cities with a population of 100,000 or more (Census Bureau 2020). Surveys were mailed between April 2021 and November 2021 along with a self-addressed stamped envelope for return of completed surveys. This research was approved by the University of Mary Hardin-Baylor (UMHB) Institutional Review Board (IRB).

2.2 Survey Instrument. The first part of the survey focused on determining how familiar church leaders were with the Pareto Principle and explaining the definition of congregational participation for purposes of this survey. Congregational participation for this survey includes any involvement or role in the following church activities: choir, Sunday school, Bible study, youth group, fundraising events, food bank, transportation, mission trip, board membership, welcome committee, or as an usher. For this study, congregational participation excluded weekly service attendance and monetary donations. The second part of the survey asked church leaders if the Pareto Principle applied to the level of active participation in their church. They were also asked if they focus more of their time and effort on the members who participate or the members who do not participate. The last part of the survey asked each church leader about the general trend of church participation in recent years. At the end of the survey, there was an optional, open-ended question for the church leader to give their own thoughts relating to church participation.

2.3 Analysis Plan. Descriptive statistics using means (standard deviation, or SD) and frequencies (percent) were calculated for survey responses. Bivariate analyses employed Pearson’s chi-square tests. All analyses were performed using the statistical package R (R Core Team), version 3.2.3.

3. Results

3.1 Hypothesis. Our hypothesis was that 80% of congregational participation is performed by 20% of church members, which was examined using results from two surveyed samples. The results of both the original study (78.9%) and the extension study (56.6%) supported the hypothesis.

3.2 Findings. Of 437 surveys mailed in the initial study, 166 church leaders returned a completed survey for a 38.0% response rate. Church leaders responding to the survey were mostly of Baptist (42.2%) denomination. Of the 166 church leaders who completed the survey, about 1 in 5 (21.1%) recognized the concept of the Pareto Principle before it was explained to them. When asked about their church congregation, most of the church leaders (78.9%) believed the Pareto Principle did apply to the level of participation in their church. In other words, most agreed 80% of participation in church activities was provided by 20% of the members. Most leaders (84.9%) thought they should not focus their attention on the 20% of the members who provided the most support, demonstrating a general consensus that all members deserve the same attention and encouragement regardless of their level of participation. In fact, 65.0% of church leaders said they need to focus their attention on all church members.

Table 1

Survey Question	Frequency, N	Percent, %
<i>Christian denomination</i>		
Baptist	70	42.2
Lutheran	15	9.0
Church of Christ	15	9.0
Methodist	10	6.0
Episcopal	6	3.6
Presbyterian	10	6.0
Catholic	10	6.0
Non-denominational	30	18.1
<i>Participation important for success and well-being of church?</i>		
Yes	166	100
<i>Participation important for spiritual growth and well-being?</i>		
Yes	166	100
<i>Heard of Pareto Principle?</i>		
Yes	35	21.1
<i>Is 80% of participation performed by 20% of members?</i>		
Yes	131	78.9
No	27	16.3
Unsure	8	4.8
<i>Leader should focus on 20% that participate the most?</i>		
Yes	25	15.1

Survey Responses from 166 Church Leaders in Central Texas

When church leaders were asked what activity needs the most attention, a majority of the leaders (60%) responded with Sunday school. All church leaders believed congregational participation is important to an individual’s spiritual growth and well-being, as well as the success and well-being of the entire church.

3.3 Rural versus Urban. In the extension study, 53 responses were received from leaders of the 219 Christian churches in Texas surveyed (24.2% response rate). Of the survey responses, 25 (47.2%) were from rural communities and 28 (52.8%) were from urban areas. The largest denomination represented was Baptist, comprising 22.6% of responses (24.0% rural, 21.4% urban), followed by Methodist (17.0%).

The majority (56.6%) of church leaders in the extension study felt the Pareto Principle applied to the current level of participation in their church (56.0% rural, 57.1% urban). In other words, most church leaders said about 80% of the total participation in the church's programs were performed by about 20% of the church members. The church leaders who said participation does not quite follow the Pareto Principle were asked what the ratio was at their church. The answers had an average ratio of 64.7% to 35.3%, meaning these church leaders thought about 64.7% of total participation was performed by about 35.3% of the members. During the COVID-19 pandemic, we saw a slight increase in the number of church leaders (24.5%) who believe they should focus on the 20% of members contributing the most to church activities. When comparing responses from rural vs. urban churches, church leaders in urban areas were more likely to focus their attention on the 20% of members who participated the most than leaders in rural areas (39.3% vs. 8.0%, $p < 0.01$). All of the church leaders believed a church member can move from the 80% of non-active members to the 20% of active members.

3.4 Church Leader Comments. The last question on the survey was optional and open-ended to allow church leaders to share their own thoughts about participation in Christian churches in Texas, as well as their own church. Responses were received from 73.5% of the church leaders (88.0% rural, 64.3% urban). The most frequent comment was that the COVID-19 pandemic had a negative effect on church participation (40.0% overall, 31.8% rural, 50.0% urban). The second most frequent comment was that there are too many other activities in today's world that compete for members' time with church activities (32.5% overall, 18.2% rural, 50.0% urban). The next most frequent comment was a concern that the younger generation is not participating in church activities (27.5% overall, 31.8% rural, 22.2% urban).

4. Discussion

4.1 Summary. In summary, this research found that the level of participation in Christian churches in Texas largely follow the Pareto Principle. The results of both the original study (78.9%) and the extension study (56.6%) supported our hypothesis. In other words, about 80% of congregational participation is performed by about 20% of members, as reported by 78.9% of church leaders in the initial study. Our sample of Central Texas churches appeared representative as 42.2% of the responses were from Baptist church leaders, compared to the Central Texas estimate of Baptist churches to be 47% (Texas Almanac, 2021). Our sample across the state of Texas also appeared representative of Baptists in the U.S., with 22.6% Baptism in the study versus 18.7% of Christians in the U.S. overall (Hartford Institute, 2021).

4.2 The Extension Study. During the COVID-19 pandemic, we observed church leaders who reported the percent of congregational participation that followed the Pareto Principle drop from 78.9% to 56.6%. Despite this finding, most (84.9% pre-COVID-19 and 75.5% during COVID-19) of the church leaders in this study do not focus on the members who actively participate. Also, most leaders (83.0%) say that participation has decreased in recent years. Many church leaders considered the COVID-19 pandemic to be responsible for the recent drop in member participation. However, other church leaders said society has lost its religious focus and believe there are too many secular activities competing for their members' time.

4.3 Rural versus Urban Churches. Finally, we found no significant difference between rural churches and urban churches as far as participation levels. Our findings support the hypothesis that 80% of church participation is performed by 20% of the members. A strong majority of the churches not only associate their participation level with the Pareto principle, but also believe that the concept is very applicable in the everyday lives of its members.

5. Limitations and Future Research

5.1 Limitations of this Study. One limitation is that the response rate for the extension study (24.2%) was much lower than the original study (38.0%). This could be an artifact of conducting the extension study during the COVID-19 pandemic. Another limitation is that this research included samples from Texas, which may not be entirely representative of the U.S. or other geographical areas. Also, this study surveyed church leaders, where a follow-up to this study could assess responses directly from church members.

5.2 Future Research on this Topic. Future research should determine if the Pareto Principle applies to other faiths and geographical locations. It could also focus on the best methods to increase participation levels among church members, particularly the younger generation. Given the decreases in participation observed during the pandemic, a post-pandemic survey could determine if participation returns to pre-pandemic levels. A system could also be developed to allow church leaders to easily monitor changes in church participation and monitor trends among the 80% and 20% group of members. Trends in specific church activities may also be of interest in future work given that responses during this study suggested Sunday school needed the most help from members. Ways to improve overall member participation in specific church activities could also be explored.

Finally, it has been claimed that the Pareto Principle can be applied to the 2nd and 3rd power (Marshall, 2013). In other words, 20% of the original 20% (which is 4%) accounts for 80% of the original 80% (which is 64%). A researcher could determine if the 4% most active church members account for 64% of total church participation. This would support the claim that the Pareto Principle extends to the 2nd power, when applied to church participation.

REFERENCES

- Abdulrazak Abyad, (2021 April) “The Pareto Principle: Applying the 80/20 Rule to Your Business”, Middle East Journal of Business. 2020; 15(1): 6-9. Available from: http://mejb.com/upgrade_flash/April%202021/Pareto.pdf
- Hartford Institute for Religious Research, (2021) “Fast Facts about American Religions”. Available from: http://hrr.hartsem.edu/research/fastfacts/fast_facts.html
- Jones, Jeffrey M., (2021 March 29) “U.S. Church Membership Falls Below Majority for First Time”, Gallup News, Gallup Poll Social Series, Copyright 2022. Available from: <https://news.gallup.com/poll/341963/church-membership-falls-below-majority-first-time.aspx>
- Laoyan, Sarah, (2021 August 6) “Understanding the Pareto Principle (The 80/20 Rule)”, Asana. [Blog]. Available from: <https://asana.com/resources/pareto-principle-80-20-rule>
- Marshall, Perry (2013) “80/20 Sales and Marketing”, Entrepreneur Press
- Mulyanegara, R., Tsarenko, Y., and Mavando, F. (6 December 2010) “Church Marketing: The Effect of Market Orientation on Perceived Benefits and Church Participation”, Services Marketing Quarterly, Volume 32, 2010, Issue 1. Available from: <https://www.tandfonline.com/doi/abs/10.1080/15332969.2011.533100>
- Nieuwhof, Carey, (2022 January 28) “7 Ways to Grow Church Attendance By Increasing Engagement”. Available from: <https://careynieuwhof.com/7-ways-grow-church-attendance-increasing-engagement/>
- Reclaim, (2021 May 25) “Pareto Principle: Using 80/20 Rule for Priority Management” [Blog]. Available from: <https://reclaim.ai/blog/pareto-principle-for-priority-management>
- Salisbury, Matthew, (1 December 2021) “Rethinking ‘active participation’ after a Pandemic”, Theology Journal. Volume: 124, Issue: 6, Pages: 410-419. Available from: <https://journals.sagepub.com/doi/full/10.1177/0040571X2111056792>
- Texas Almanac, (2021) “Religious Affiliation in Texas”, Texas State Historical Association. Available from: <https://www.texasalmanac.com/articles/religious-affiliation-in-texas>
- U.S. Census Bureau, “Urban and Rural Classification”, 2020. Available from: <https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html#:~:text=The%20Census%20Bureau%20delineates%20urban,included%20within%20an%20urban%20area.>
- U. S. Department of Agriculture, Economic Research Service, “What is Rural”, October 23, 2019. Available from: <https://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural.aspx#:~:text=According%20to%20the%20current%20delineation,not%20necessarily%20follow%20municipal%20boundaries.>
- Wang, Wendy, (20 January 2022) “The Decline in Church Attendance in COVID America”, Institute for Family Studies [Blog Post], Charlottesville, VA. Available from: <https://ifstudies.org/blog/the-decline-in-church-attendance-in-covid-america>