

Charts and Graphs

Charts and graphs are a unique and often powerful way of presenting information to people. *So much data* is available to us today that we could easily spend the rest of our lives publishing different charts and graphs about our congregation and our community. The challenge to each MST is two-fold: first, determining which data is important; and second, determining which important data is more effectively communicated via graphics than via the printed word. There are some metrics that MSTs commonly graph over a period of time. These include:

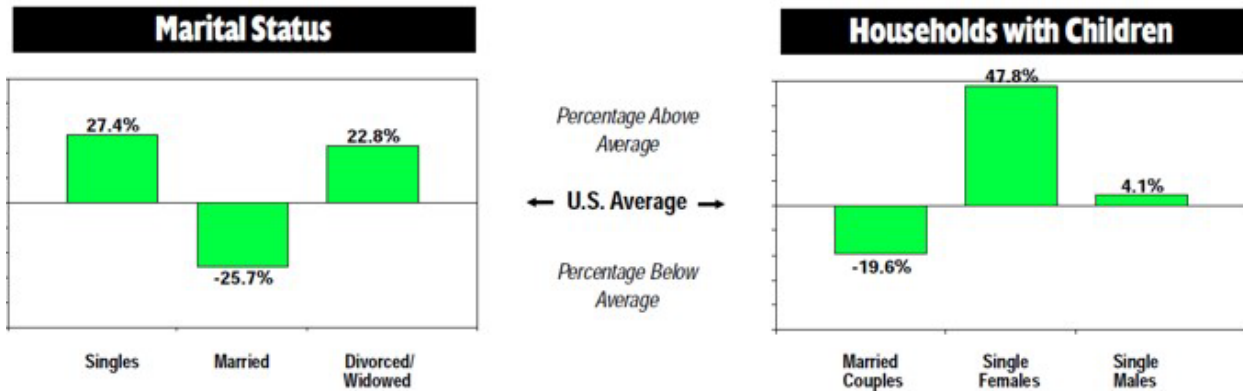
- Membership
- Revenue & expenses
- Worship Attendance
- Christian Education engagement
- Average age of members, or percentage of members within a certain range (e.g., 25-40)

Other metrics can include baptisms, deaths, weddings, new members. However – particularly if these numbers are fairly small or unchanging – then perhaps this is a good example of data that is not important, or not important enough to put in a chart.

There are other metrics, however, that – when illustrated with a chart or graph – can reveal information that is critical both to the church’s current health, and to its future planning. Below are some examples to consider. *Note: apart from the first example, which was taken from a commercial demographic report commissioned by a congregation, all of these charts were created by MSTs with Excel.*

Households

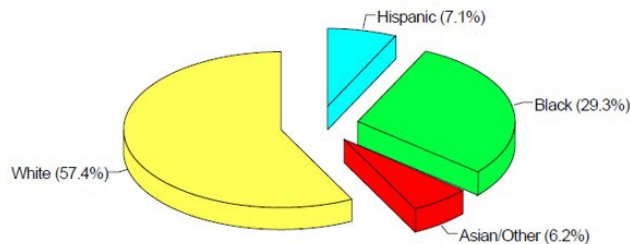
Some simple community demographics can tell you a lot about the surrounding neighborhood. These two bar graphs depict Marital Status and Households with Children for a given area, measured against the US average. You may want to compare that data with the data for your county, or even your congregation.



Racial/Ethnic Demographics

Pie charts are particularly helpful when displaying the percentage composition in a population.

Population By Race/Ethnicity-2016

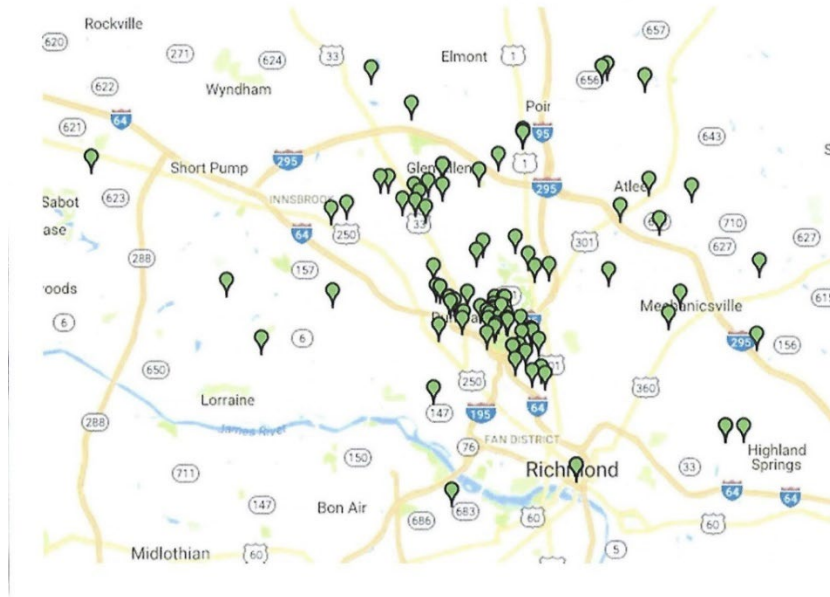


This is a snapshot of one year, for one neighborhood. You might also run this analysis on your congregation, on the US, and on the PCUSA for that same year, and then compare the four. You might then go a step further and get the same data on all four populations from twenty years earlier, and see how the groupings have changed.

Geography

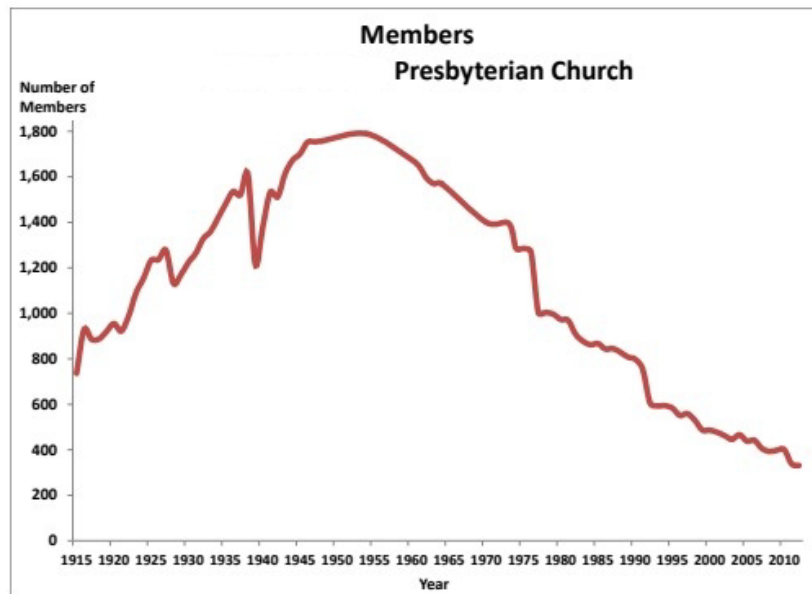
A map of members' homes is a good reference when the church considers new Outreach and Mission ministries. It's also a particularly helpful gift for a new pastor upon their arrival. If they're not familiar with the area, this will quickly prove to be of tremendous value when they plan pastoral and hospital visits.

Member Regional Geoplot

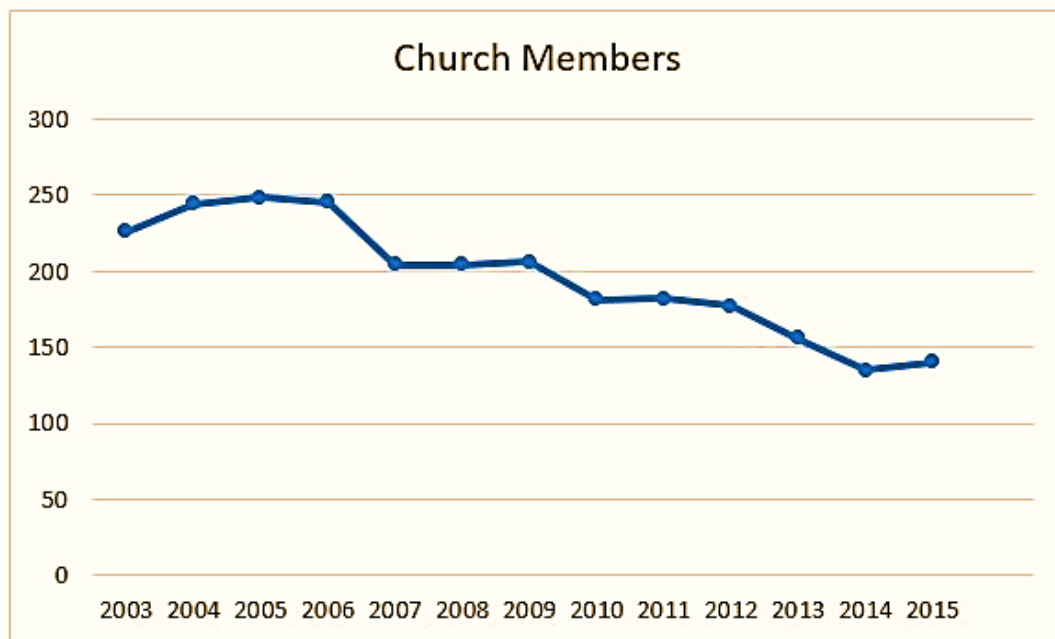


Membership

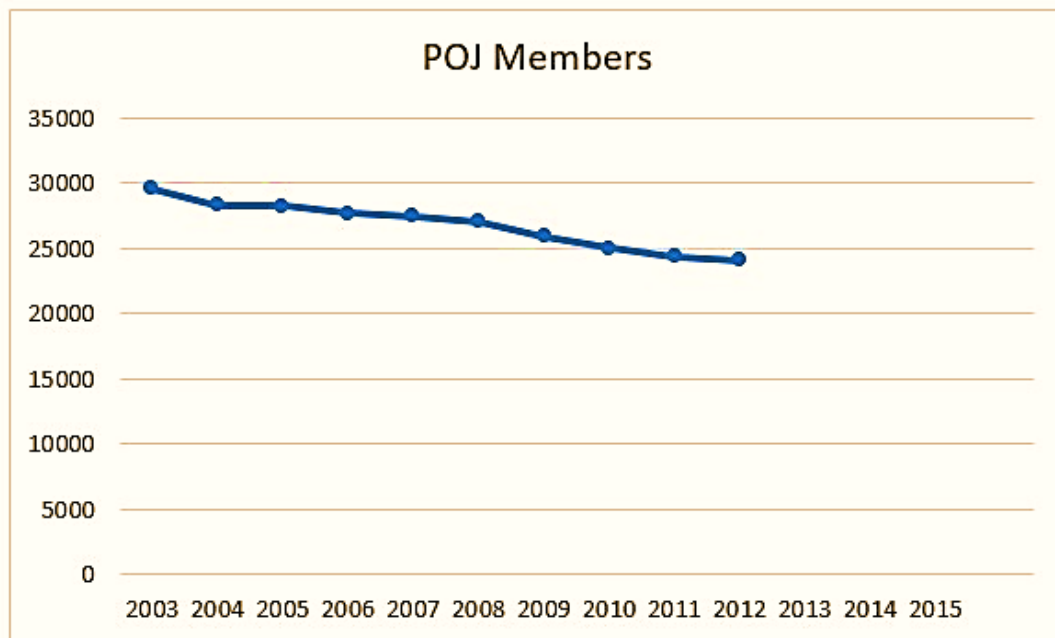
This church was able to access membership records going all the way back to 1915, so the MST decided to incorporate it all. Particularly if you have many older members, they might appreciate seeing data from their younger years.



Sometimes it can be helpful to compare data with a related group. The next pair of charts from a Mission Study Report of a POJ congregation compares membership trends of the church and of the presbytery.

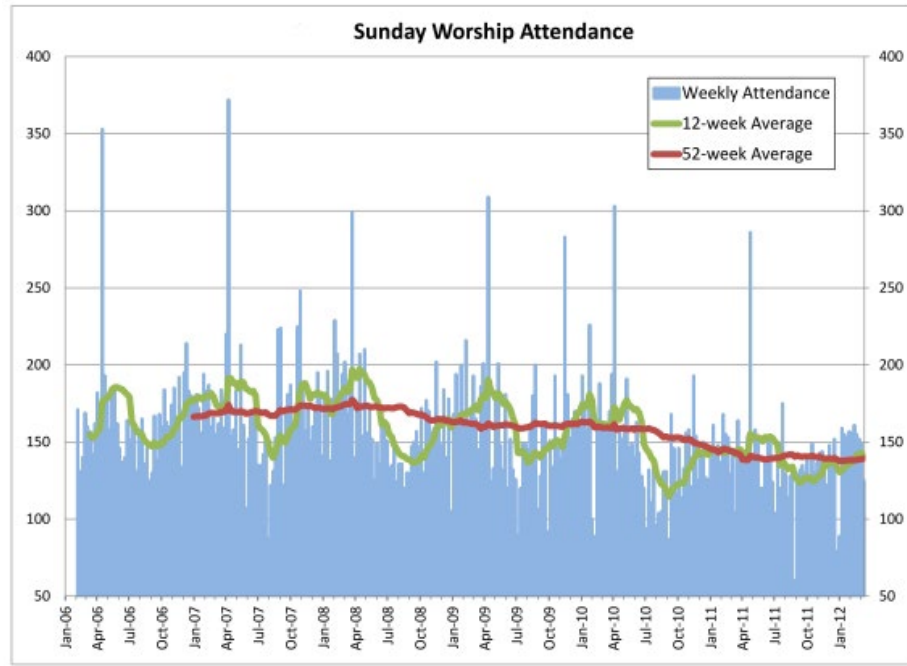


The above represents a decline of approximately 38% since 2003. This is greater than the average decline in membership of the Presbytery of the James (POJ) of approximately 22%, which is depicted below.



Attendance

This illustration uses a bar graph to display the data, and then superimposes a line graph to show the running average. This function is available in Excel.



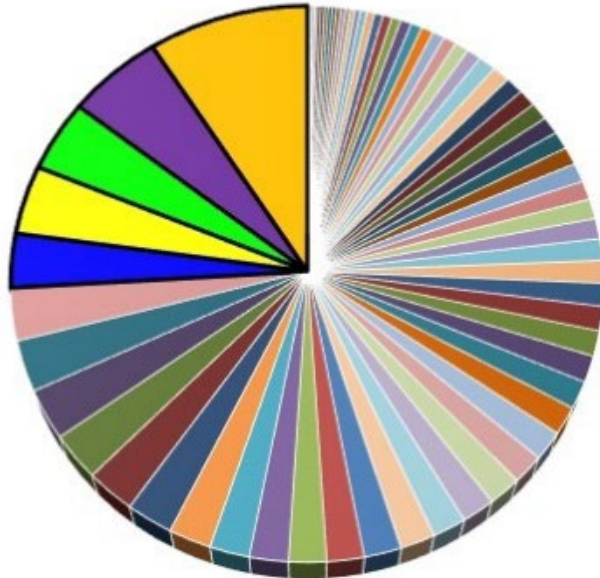
Giving

This last example is one that revealed information that – well, perhaps it was not technically “unknown,” but it certainly had not been *seen*. It took the giving data from all members from each of the previous five years. It did not require divulging any names – just five long lists of numbers (total given by each giving unit), each of which was sorted from smallest to largest and then displayed in a pie chart.

It is not uncommon – particularly in congregations where the membership of the counting team has rotated – for people to have a general idea of who the biggest givers are. What most people don’t know (and, more importantly, what most Sessions and Finance Committees don’t know) is *how much* of their annual budget depends on these larger givers. This is important for future planning, particularly if (for example) your top three givers are all over 85 years of age. These charts show what this church discovered. *Each wedge represents the total amount given that year by a “giving unit.”*

Income Distribution: 2015

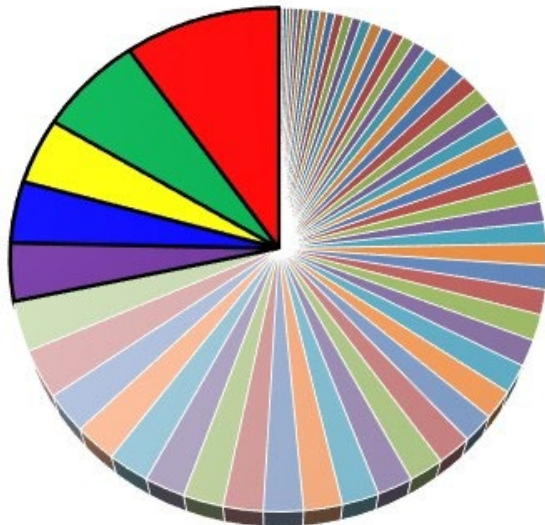
71 Donors



**5 Donors (7%)
provided 26% of
Income**

Income Distribution: 2016

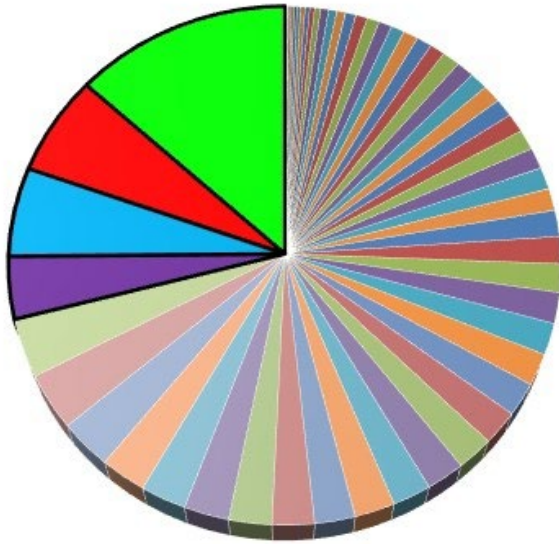
62 Donors



**5 Donors (8%)
provided 28% of
Income**

Income Distribution: 2017

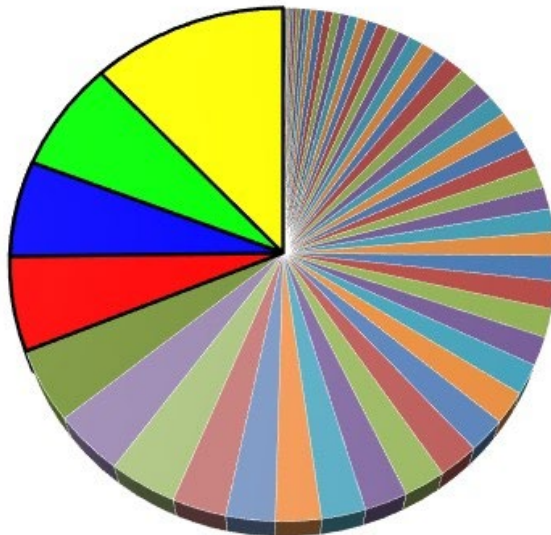
60 Donors



**4 Donors (7%)
provided 29% of
Income**

Income Distribution: 2018

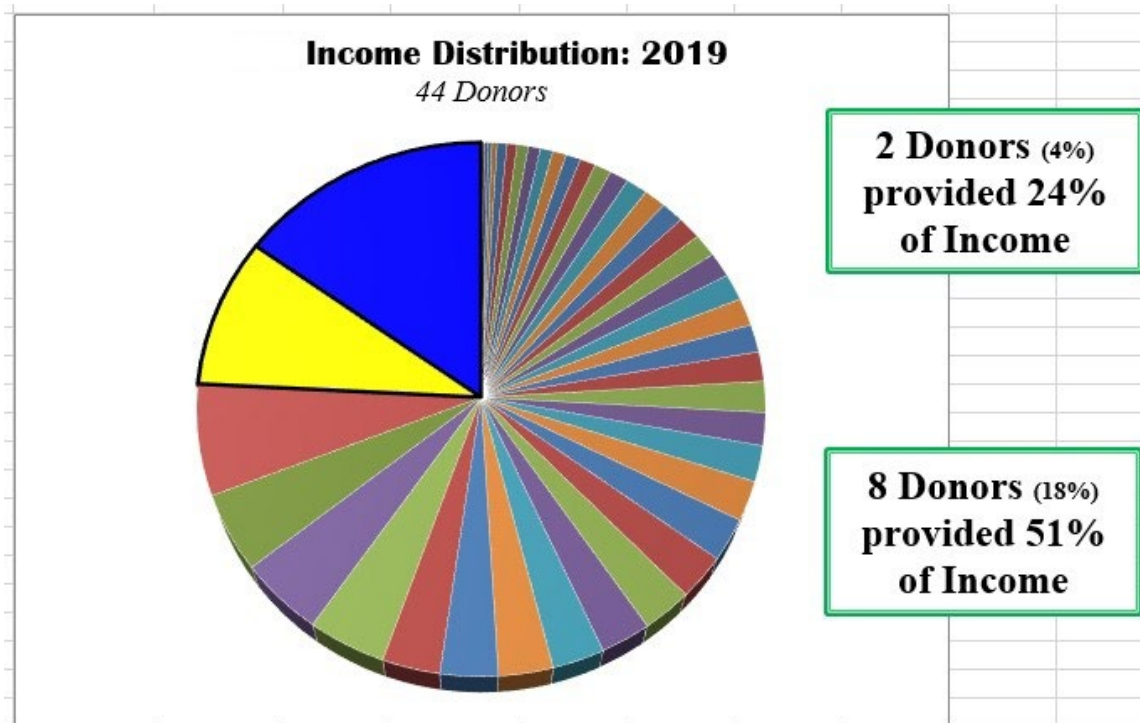
57 Donors



**4 Donors (7%)
provided 31% of
Income**

**3 Donors (7%)
provided 25% of
Income**

**10 Donors (18%)
provided 52% of
Income**



In all of these charts, every wedge represents one person's total giving for that year. As mentioned above, some people knew who the big givers were. A few people had a pretty good idea how much those givers had contributed. But until the MST ran this analysis, no one knew that the church had reached a point where *a quarter of its revenue came from two people*. And half of its revenue came from *eight* people! The chart for 2015 shows that even then, a quarter of the church's revenue came from just 7% of its members. That's not terribly healthy, although it's not unusual. But partly because the change was gradual, no one was aware of the church's precarious financial position at the time of the Mission Study. Clearly this situation had critical and practical ramifications when proposing terms of call for their next pastor.

It was also helpful to have a pie chart for each year, because it helped people to see how this situation had developed. Note that the percentages were affected by three different factors: 1) the number of donors, 2) the total amount received each year, and 3) the amount of individual members' donations.

This is a textbook example of how a chart revealed previously "unseen" data and made everyone sit up and take notice. Congregations have been similarly surprised by charts communicating the degree of their neighborhood's racial/ethnic diversity, the scattered geography of members, and other data. You are encouraged to make good and wise use of these tools.