A Simple Analysis of the Apportionment System of the West Ohio Annual Conference of the United Methodist Church

by

The Rev. Dr. R. Stanley Sutton

August 1997

Preface

For most Conference Treasurer's, Paul's admonishment to the Philippians could be restated: "Recalculate apportionments always. And again I say, recalculate!" Periodically, treasurers go off in search of the holy grail - a better, fairer, more acceptable method of calculating apportionments. We fill out surveys for each other, share data, form study task forces and vote at annual conference. To what end? Is it possible to arrive at a "fairer" system? How does our present apportionments system work? For several years I've dreamed of expanding the basic apportionment formula to reveal all its major components. In 1989 I drafted an analysis of the Detroit Conference apportionment system. Much of this work is based on that draft.

This paper is like riding a bicycle "no-handed": it attracts attention, it's easier to do than it looks, but it doesn't get you from point A to point B any faster. This paper was written to test the capabilities of a new desktop publishing program. Alas, it is not the result of any study leave, doctoral program or conference-appointed task force. I apologize for this lapse in United Methodist tradition.

Introduction

As United Methodists we proclaim that we are a "connected" church, different in structure, attitude and polity from other Christian communions. While each local church has a high degree of autonomy and independence, it is, nevertheless, influenced by all other local churches in the denomination. The "connection" has its birth in Wesley's theology, its adolescence in organizational structure, and its maturity in the financial links between the churches. The financial links are "apportionments".

From the perspective of the local church, apportionments are often seen as irrational financial demands from on high. In fact, they are nothing more than reflections of the local churches working in consort to accomplish ministry no one church could do alone.

The purpose of this paper is to explore the nuances of the financial link, "apportionments", and show how each and every local United Methodist church is financially connected to every other local church in the denomination.

Budgets

The local church expense budget has two components - its own expenses and those generated as a result of its participation in the connection, i.e. its apportionments.

(1) $$b = w + a$$

where b = the total expense budget of the local church
w = local expenses
a = apportionments

In a similar fashion the expense budget for the annual conference is comprised of two components: those established by representatives of its member churches and those which come as a result of its participation in the denomination.

(2) $$B = C + G_a$$

where B = the annual conference budget
C = the conference's expenses
G_a = expenses apportioned to the annual conference by the General Church

Budgets in the denomination reflect the hierarchical structure of the United Methodist Church. Although attempts are made to draw the usual pyramid with the local church at the apex, the workings of the financial system are more clearly understood with the General Church on top.

The General Church passes apportionments to each annual conference, which passes apportionments to each local church. The Jurisdictional Conference could be assumed to lie between the General Church and the annual conferences. In the North Central Jurisdiction, however, the financial impact on the total system by the jurisdiction is negligible. The role of the jurisdiction is omitted in this analysis. District apportionments, often derived from conference apportionments, are also omitted.

The budget process does not strictly follow hierarchial lines. At each level there is room for limited autonomy in deciding how apportionments are calculated. The general conference budget is distributed across each annual conference by measuring the activity of each local church in a conference *relative to all other local churches in the denomination.* This results in a lump sum amount assigned to each annual conference. The annual conference then re-apportions the amount across its local churches according to its own apportioning formula. Notice that the formula by which the general church apportionment is made to the annual conference may not be the same formula by which the annual conference apportions each local church. The budget for the annual conference is distributed to each local church and is thus equal to the total apportionments of all the local churches.

(3) $$A = \Gamma B$$

where A = total apportionments of the annual conference
B = annual conference's expense budget
Γ = multiplying factor

In ideal cases $\Gamma = 1$, i.e., the conference expense budget is divided across all churches of the annual conference. In practice some churches are "missions", not responsible for paying their full share: other churches open or close during the year and do not figure into the calculations. Although the final amount to be apportioned by the annual conference depends heavily on budgeted expenses, miscellaneous income from the Office of Development, interest income, etc. can affect the final number. For the purpose of this analysis, these factors are ignored so that $\Gamma = 1$.

A First Look at Apportionments

The problem now becomes how to apportion the conference expense budget, which also includes components of the General Church's budget, to each local church. The apportioning factor is a function of the local church, i.e. by its own actions each local church determines its

"fair share".

(4) $$\gamma_i = f(local\ church)$$

where γ_i = apportioning factor for each local church

It is imperative that γ_i depend solely on activities of the local church, else the total apportionment system of the United Methodist Church could become unstable. Consider, for example, what happens if apportionments themselves are used in the apportioning function; there would be a feedback loop or "wrap around". If apportionments (expenses coming from outside the local church) were included, then the church which paid its apportionments in full one year would find its apportionments increasing the next year. Similarly, a church which failed to pay its apportionments in one year, would find them reduced the following year. Any apportioning system that includes factors outside of the local church itself will introduce a compounding effect that will soon become unstable.

(5) $$a_i = \gamma_i B$$

where a_i = the local church's apportionments
γ_i = apportioning factor of the local church, its "index number"

Now

(6) $$\Gamma = 1 = \sum_{i=1}^{\nu} \gamma_i$$

where ν = number of churches in the annual conference.

Equations 5 and 6 are significant. Regardless of what apportioning factor, formula, or "tax table" system is used to spread the conference budget across the local churches, as long as $\Gamma = 1$, it is a sum-zero game. Whenever one church's apportionments rise, the other churches are reduced by a corresponding amount. Decreases in any one local church means there is a rise somewhere else in the annual conference. When churches merge or close, the all other churches must take a bigger share of the budget. When new churches start, other churches receive reduced apportionments. There is no free lunch with apportionments.

Substituting Eq. 6) in Eq. 3),

(7) $$A = \sum_{i=1}^{\nu} a_i = B \sum_{i=1}^{\nu} \gamma_i$$

Each annual conference decides upon its own method for determining γ_i. For most annual conferences a local church's membership, μ, and its internal operating expenses, ϵ, are used in calculating γ_i. Thus,

(8) $$\gamma_i = f(\mu_i, \varepsilon_i)$$

These two factors are given weights so that membership could influence apportionments more, less or the same as internal expenses.

(9) $$\gamma_i = \xi f(\mu_i) + (1-\xi) f(\varepsilon_i)$$

where ξ = weighting factor.

For the West Ohio Annual Conference,

(10) $$f(\mu_i) = \frac{\mu_i}{\sum_{i=1}^{\nu} \mu_i}$$

and

(11) $$f(\varepsilon_i) = \frac{\varepsilon_i}{\sum_{i=1}^{\nu} \varepsilon_i}$$

Combining Eq. 10 and Eq. 11 with Eq. 9 gives

(12)
$$\gamma_i = \xi \frac{\mu_i}{\sum_{i=1}^{v} \mu_i} \mu_i + (1-\xi) \frac{\varepsilon_i}{\sum_{i=1}^{v}} \varepsilon_i$$

Substituting Eq. 12 in Eq. 6 yields

(13)
$$a_i = B \left[\xi \frac{\mu_i}{\sum_{i=1}^{v} \mu_i} + \left((1-\xi) \frac{\varepsilon_i}{\sum_{i=1}^{v} \varepsilon_i} \right) \right]$$

Thus, a local church's apportionments are nothing more than its fair share of the conference budget as determined by measuring its membership and internal operating expenses relative to the membership and internal operating expenses of all other local churches in the annual conference.

The analysis thus far assumes that there is instant communication and reactions among all local churches. In fact, there is quite a day. At the close of a year each local church reports its statistics, including membership and internal operating expenses. These are compiled, printed and received by the conference in June. The data are then used to calculate the following year's apportionments. Thus, there is a two year lag in the apportionment link. The apportionments at time t are given by

(14)
$$a_{i_t} = B_t \left[\xi \frac{\mu_{i_{(t-2)}}}{\sum_{i=1}^{v} \mu_{i_{(t-2)}}} + \left((1-\xi) \frac{\varepsilon_{i_{(t-2)}}}{\sum_{i=1}^{v} \varepsilon_{i_{(t-2)}}} \right) \right]$$

Eq. 14 is a more formal presentation of the one sent to each local church treasurer in describing apportionments. For West Ohio $\xi = ⅓$, i.e membership is weighted 33% and internal operating expenses are weighted 67%. Eq. 14 shows that when the conference budget is considered monolithic and self-contained, apportionments are entirely determined by what happens with membership and internal operational expenses of each local church. Nevertheless, this does not fully describe the connecting links to all other churches in the denomination. To do that we must turn our attention to the conference budget.

Annual Conference Budget

As was seen in Eq. 2) the annual conference's budget has two components: its internal expenses, C, and those coming from the General Church, G. This latter component can have several parts as determined by each General Conference. Regardless of the General Church's budget or its parts, the money is raised by apportioning the budget to the various annual conferences based upon the actions of each local church. For the current quadrennium,

(15) $$G_a = P_a + M_a + B_a + F_a + E_a + W_a + I_a + D_a$$

where G_a = an annual conference's apportionment from the General Church
P_a = pension apportionment
M_a = Ministerial Education apportionment
B_a = Black College Fund apportionment
F_a = Africa University apportionment
E_a = Episcopal Fund apportionment
W_a = World Service Fund apportionment
I_a = Interdenomination Cooperation Fund apportionment
D_a = General Administration Fund apportionment
R_a = Missional Fund apportionment

Pensions

In the strictest sense the Pension apportionment is a deferred and direct cost associated with a pastor's compensation. In the West Ohio Conference it has been decided to bill directly to each local church the cost of its current pastor's pension. This Ministerial Pension Plan (MPP) bill is received monthly by the local church. In a similar way, the health insurance premiums for the pastor serving a church are billed directly to the local church. The are not apportionments and are not included in this analysis.

The direct billed costs, however, are not all of the benefit compensation. Full-time active pastors receive Comprehensive Protection Plan (CPP) benefits of disability and life insurance. Retired pastors receive Medicare supplemental health insurance, death benefits, and pre-1982 pension payments. These costs, billed directly to the conference by the General Board of Pensions and Health Benefits, are apportioned. Thus, the Pension Fund apportionment has three major components: CPP, retiree's health insurance, and pre-1982 pension payments.

To compute the CPP costs, one must first calculate the Denominational Average Compensation (DAC). In practice, this computation is made by the General Board of Pensions and Health Benefits based upon the charge conference information furnished by every United Methodist Church in the country.

(16)
$$DAC = k\frac{\sum_{i=1}^{\omega} S_i}{\omega}$$

where DAC = Denomination Average Compensation
S = pastors' salaries
ω = the number of full-time pastors in the denomination
k = housing factor

Notice that average compensation includes not only salary, but also housing. When a parsonage is provided k = 1.25, as set by the General Conference. If a housing allowance is provided, k = 1.0 and the housing allowance is added to the cash salary, i.e. S_i = cash salary + housing allowance.

(17)
$$CPP = .044\sum_{i=1}^{\zeta} kS_i\Big|_0^{DAC} = .044\sum_{i=1}^{\zeta} kS_i\Big|_0^{\sum_{i=1}^{\omega} kS_i}$$

where ζ = number of active pastors in the conference

The "old" pension plan had defined benefits, i.e. a fixed amount is paid to each retiree based upon his or her years of service up through 1981. Each year at the annual conference session, the Service Annuity Rate (SAR) is established. This, in turn, must be funded. Under the rules adopted by the General Conference there must be a parity between the pre-1982 and the post-1981 plans (between the "old" and the "new" plans). This parity is set at 1% of the Conference Average Compensation (CAC).

(18)
$$CAC = \frac{\sum_{i=1}^{\zeta} S_i}{\zeta}$$

Thus,

(19)
$$SAR = .01CAC = .01\frac{\sum_{i=1}^{\nu} S_i}{\zeta}$$

In practice, the amount the Conference Board of Pensions decides to budget for the unfunded pension liability is based upon the SAR and an actuarial study provided by the General Board of Pensions. The final number depends upon the CAC, the numbers of retired pastors and surviving spouses, and their age distribution. In 1997 the unfunded liability required payments of $1.6 million. This will decrease until the last of the pre-82 pensioners dies, about 2050. For the purpose of this analysis the actuarial number is considered a factor, Y, that is about 4,570 in 1997 and decreases by 86 each year.

(20) $$SAR_a = Y * SAR$$

The final component of the pension apportionment is the retiree's health insurance. Since each retiree and surviving spouse has a policy, the cost is the annual premium, H_p, times the number of retirees and spouses.

(21) $$H = H_p * \rho$$

where ρ = the number of retirees and surviving spouses in the health plan
H_p = annual health care premium

Putting the three pension components together, remembering that the General Board of Pensions also has a two year lag between data and apportionments, yields

(22) $$P_{a_t} = .044 \sum_{i=1}^{\varsigma} kS_{i_{(t-2)}} \Big|_0^{\sum_{i=1}^{\omega} kS_{i_{(t-2)}}} + (Y * SAR) + (H_p * \rho)$$

World Service Fund, et al

The World Service and Conference Benevolence Fund apportionment is in reality two apportionments. The World Service portion is established by the General Conference every four years; the Conference Benevolence portion is set annually by the West Ohio Conference.

The various apportionments received from the General Church are based upon the budget set at the General Conference session every four years. The total is then apportioned across all the annual conferences by a formula that uses membership and selected local church expenses. Although the weighting factors used for membership and expenses are the same as in West Ohio, (1/3 and 2/3), they need not be. For this analysis they are generalized. Since it is only after a conference session that statistical data can be sent to the General Church, another year is added to the time lag. The formula used by the General Church also takes a two year moving average.

(23)
$$W_{a_t} = B_{wa}\left[\psi\frac{\sum_{i=1}^{v}\mu_{i_{(t-4)}}+\sum_{i=1}^{v}\mu_{i_{(t-3)}}}{\sum_{i=1}^{n}\mu_{i_{(t-4)}}+\sum_{i=1}^{n}\mu_{i_{(t-3)}}} + (1-\psi)\left(\frac{\sum_{i=1}^{v}\varepsilon_{i_{(t-4)}}+\sum_{i=1}^{v}\varepsilon_{i_{(t-3)}}}{\sum_{i=1}^{n}\varepsilon_{i_{(t-4)}}+\sum_{i=1}^{n}\varepsilon_{i_{(t-3)}}}\right)\right]$$

where ψ = weighting factor
n = number of churches in the denomination
B_{wa} = World Service Budget

For the current quadrennium the Black College, Africa University, General Administration, Interdenominational Cooperation and Focus 2000 funds are all apportioned by the same formula as the World Service. Therefore,

(24)
$$W_{a_t} = K_a\left[\psi\frac{\sum_{i=1}^{v}\mu_{i_{(t-4)}}+\sum_{i=1}^{v}\mu_{i_{(t-3)}}}{\sum_{i=1}^{n}\mu_{i_{(t-4)}}+\sum_{i=1}^{n}\mu_{i_{(t-3)}}} + (1-\psi)\left(\frac{\sum_{i=1}^{v}\varepsilon_{i_{(t-4)}}+\sum_{i=1}^{v}\varepsilon_{i_{(t-3)}}}{\sum_{i=1}^{n}\varepsilon_{i_{(t-4)}}+\sum_{i=1}^{n}\varepsilon_{i_{(t-3)}}}\right)\right]$$

where $K_a = B_{WA} + B_{BA} + B_{FA} + B_{IA} + B_{GA} + B_{F2}$
and B_{WA} = World Service Budget
B_{BA} = Black College Fund Budget
B_{FA} = Africa University Fund
B_{IA} = Interdenomination Cooperation Fund Budget
B_{F2} = Focus 2000 Fund Budget

Ministerial Education Fund

The Ministerial Education Fund apportionment is based only upon the expenses of the local church and not its membership. Two percent of a two year average of local church expenses makes up the apportionment.

(25)
$$M_{a_t} = .02\left[\frac{\sum_{i=1}^{v}\varepsilon_{i_{(t-4)}}+\sum_{i=1}^{v}\varepsilon_{i_{(t-3)}}}{2}\right]$$

Episcopal Fund

The Episcopal Fund is unique in that it is not based upon a budget but rather direct local church expenses, to wit, a portion of the total cash salaries paid pastors and associate pastors serving in an annual conference. Each year a factor, r, is established by the General Council on Finance and Administration. It can range from .02 to .035. Thus,

(26)

$$E_{a_r} = r \sum_{i=1}^{\zeta} S_{i_{(t-2)}}$$

where $0.035 \leq r \geq 0.02$

Putting It Together

Referring back to eq. 15, we can see that it can now be expanded.

(27)

$$G_a = .044 \sum_{i=1}^{\zeta} kS_{i_{(t-2)}} \Big|_{0}^{\sum_{i=1}^{\omega} kS_{i_{(t-2)}}} + (Y * SAR) + (H_p * \rho) + K_a \left[\psi \frac{\sum_{i=1}^{\nu} \mu_{i_{(t-4)}} + \sum_{i=1}^{\nu} \mu_{i_{(t-3)}}}{\sum_{i=1}^{n} \mu_{i_{(t-4)}} + \sum_{i=1}^{n} \mu_{i_{(t-3)}}} + (1-\psi) \left(\frac{\sum_{i=1}^{\nu} \varepsilon_{i_{(t-4)}} + \sum_{i=1}^{\nu} \varepsilon_{i_{(t-3)}}}{\sum_{i=1}^{n} \varepsilon_{i_{(t-4)}} + \sum_{i=1}^{n} \varepsilon_{i_{(t-3)}}} \right) \right] + .02 \left[\frac{\sum_{i=1}^{\nu} \varepsilon_{i_{(t-4)}} + \sum_{i=1}^{\nu} \varepsilon_{i_{(t-3)}}}{2} \right] + r \sum_{i=1}^{\zeta} S_{i_{(t-2)}}$$

Substituting eq. 27 into eq. 14 and adding the conference budget, C, generates the full expansion of the apportioning formula.

$$a_{i_t} = \left[\xi \frac{\mu_{i_{(t-2)}}}{\sum_{i=1}^{\nu} \mu_{i_{(t-2)}}} + \left((1-\xi) \frac{\varepsilon_{i_{(t-2)}}}{\sum_{i=1}^{\nu} \varepsilon_{i_{(t-2)}}} \right) \right] \cdot$$

$$\left\{ .044 \sum_{i=1}^{\varsigma} kS_{i_{(t-2)}} \Big|_{0}^{\sum_{i=1}^{\omega} kS_{i_{(t-2)}}} + (Y * SAR) + (H_p * \rho) \right.$$

$$\textbf{(28)} + K_a \left[\psi \frac{\sum_{i=1}^{\nu} \mu_{i_{(t-4)}} + \sum_{i=1}^{\nu} \mu_{i_{(t-3)}}}{\sum_{i=1}^{n} \mu_{i_{(t-4)}} + \sum_{i=1}^{n} \mu_{i_{(t-3)}}} + (1-\psi) \left(\frac{\sum_{i=1}^{\nu} \varepsilon_{i_{(t-4)}} + \sum_{i=1}^{\nu} \varepsilon_{i_{(t-3)}}}{\sum_{i=1}^{n} \varepsilon_{i_{(t-4)}} + \sum_{i=1}^{n} \varepsilon_{i_{(t-3)}}} \right) \right] +$$

$$\left. .02 \left[\frac{\sum_{i=1}^{\nu} \varepsilon_{i_{(t-4)}} + \sum_{i=1}^{\nu} \varepsilon_{i_{(t-3)}}}{2} \right] + r \sum_{i=1}^{\zeta} S_{i_{(t-2)}} + C \right\}$$

Final Thoughts

Equation 28 is a full expansion of the apportioning formula used in the West Ohio Conference. Since many terms of the equation include costs and membership of <u>all</u> churches in the United Methodist Church, the financial decision each church affects the churches of West Ohio. Simply put, changes in a church's membership or local expenses affect the apportionments of every church in the denomination.

The full expansion equation can be used in a computer simulation to test various apportioning assumptions and changes. For example, what happens if membership is removed from the apportioning formula? What happens to apportionments if the CAC increases faster than the DAC? If a church decreases its expenses 8%, how much will apportionments change? It is possible to collect the apportioning function $f(\gamma_i)$ for each annual conference and thereby model the financial connections of the entire denomination.

Stuck at the end of equation 28 is the factor C, the conference budget items not already included in the formula. In practice these costs are in the Conference Administration and Ministerial Support (CAMS) fund and the Conference Benevolence portion of the World Service and Conference Benevolence (WS/CB) fund. At the present time the WS/CB fund is evenly divided between the world and the conference. Thus, the amount apportioned for conference

benevolences is given by equation 23. Approximately 75% of the CAMS fund is a function of the CAC (e.g. district superintendent and staff salaries, equitable compensation, etc.).

Apportionments, the cost of doing mission and mission cooperatively, are determined by the accumulated financial actions of all the local churches in the denomination.