

PROFIT THY NEIGHBOUR? WEALTH CREATION AND CHRISTIAN ACTIVITY.

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1 Introduction

Christians living in countries with developed economic systems often find themselves confronted with the question of how they should divide their time between career and church related activities. There appears to be a mutually exclusive position whereby time spent at work in secular institutions excludes time dedicated to Church activity. While the employee might justly resolve to devote his entire life to Christian service, in the sense of attempting to be obedient to God at all times, if the resulting activity is seen to encroach on time at work which should be spent doing other tasks, then the employee will be promptly fired. Moreover this mutually exclusive position certainly seems apposite when sitting alone in front of a computer screen for hours on end, and similarly, numerous aspects of Christian activity, at the heart of Christianity and its mission, cannot take place within the confines of an office or other place of work. The water-cooler is not well-suited for baptism, for example, nor the canteen for celebrating Eucharist. Thus where it can seem that time spent in career-pursuits could be more profitably spent in direct church activity, numerous Christians prayerfully consider trading their work in a secular environment for full-time Christian ministry (Roberts and Thornborough, 2006). This is understood to be evident in the example of Simon Peter and his brother Andrew leaving their nets, and James and John their boat, to follow Jesus and become ‘fishers of men’ (Mt. 4.18-22)³. This dichotomy between work and witness will thus be initially addressed here on its own terms to the extent that we will consider that the ‘output’ of Christian activity increases according to time and effort spent exclusively upon such tasks. This is a highly nuanced issue, however, and in practice the broad spectrum of Christian service is integrally related to many other activities, including work within secular institutions, which we will consider further from a theological perspective.

It is apparent that this dilemma arises most frequently in circumstances where church ministry is highly dependent on the creation of wealth among its members in secular institutions. Churches need finance, it seems, just as they need ministers

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³All biblical citations (NRSV, 1995) unless stated otherwise.

of the Gospel. Even in the Apostolic church it is evident that Paul supported his ministry with the income from his profession of tent-making (Acts 18.1-3; 20.33-35 cf. 2 Thess. 3.7-8), eschewing the right to gain financially from his proclamation of the Gospel (1 Cor. 9.13-15). So too the distribution of possessions among believers according to their need detailed in Acts, presupposes the creation of wealth, with the provision of accommodation and accompanying hospitality reliant on some form of income (Acts 2.44-47; 16.14-15, 40). There is, of course, the notion of 'living by faith', but this relies on charity which, with some notable exceptions, is most likely provided by Christians working in secular institutions. Correspondingly, for those who remain in careers seemingly oriented toward wealth accumulation, there is then the issue of the extent to which that wealth is donated for use in Christian ministry. It appears difficult to reconcile a high degree of wealth retention with New Testament teaching on the complications of great riches (e.g. Mk 10.17-30) and on generous, joyful giving⁴. This perhaps serves to highlight, however, the universal nature of sin, which is evident in the selfishness of such action whereby the pursuit of career to the detriment of all else and the accumulation of excessive wealth might be considered as self-orientated and indeed actively opposed to Christ's emphasis upon love of one's neighbour⁵. How then should wealth creation and Christian activity be balanced and how might both churches and their members respond in respect to the creation of wealth?

This paper introduces a model to serve as a resource in formulating a response to the questions outlined above by allowing both created wealth and direct Christian activity to contribute to the advancement of the Church's mission. Section 2.1 provides a definition of 'the Church's mission' which we shall use in our model, and section 2.2 explores biblical and ecclesiastical notions of wealth accumulation and the giving of time and money with particular reference to the act of tithing. Section 3 expounds the model and considers the effect of sin, and in particular the retention of wealth, on its results. Section 4 concludes by examining the implications of this model for congregations attempting to maximise their contribution to the Church's mission and in responding to questions regarding the use of time and in particular that spent at work in secular institutions.

⁴Paul, for example, commends the Macedonians for giving according to, and even beyond their means despite 'extreme poverty' (2 Cor. 8.1-6).

⁵See Lk. 10.25-37. It is notable that Jesus' teaching is here juxtaposed with the parable of the Good Samaritan in which both the financial generosity and compassionate action of the Samaritan in caring for his Jewish 'neighbour' are emphasised (Lk. 10.35).

2 Exposition

2.1 *The Church's Mission*

The mission of the Church, following the 'Great Commission' has been understood primarily in terms of the proclamation of the Gospel to all people. Jesus' own preaching, however, cannot be divorced from those acts such as his table-fellowship with outcasts and compassion for the sick whom he healed, which demonstrated his very identity and authority and embodied the Gospel message of his love for all people, whom he, as the Father, desired to be saved (cf. 1 Tim. 2.4). In the same way, the proclamation of the Gospel cannot be separated from the imitation of Christ (cf. 1 Cor. 11.1) which includes social acts. Nevertheless, all activities included within this spectrum of mission would benefit from increased amount of time and effort employed to those ends. As such, the model proposed in section 3 is robust to various definitions of the Church's mission provided the fundamental practical distinction between effort dedicated to direct Christian activity and effort dedicated to creating wealth in secular institutions is retained. The plausibility of this assumption is discussed in section 4. This paper addresses the situation in individual congregations, and thus while we refer to the 'mission of the Church' we refer also to 'the church' and 'churches'.

We take a working definition of the mission of the Church as that which proceeds from the primary task of demonstrating God's love for all people through the preaching of the Gospel message, but extends to the demonstration of that love in multiple practical ways. Consequently numerous activities which relate to such 'proclamation' of the Gospel at home and abroad - ranging from the provision of both care and resources to those who are poor and in distress (cf. James 1.27; 2.15-16), to constructing and maintaining church buildings - are embraced in our dependent variable which relates to the Church's mission understood in this broad sense. It is appropriate then to term this dependent variable (see equation 1, section 3.1), as L - that is 'loving thy neighbour' (cf. Mt. 22.39; Rom. 13.8-10).

2.2 *Christian Responses to Wealth Creation*

If we are to propose a model in which the optimisation of the Church's mission in the world is dependent on individual levels of participation in certain activities, we must consider extant notions of the giving of time or money as an incumbent Christian duty. A number of churches, recognising the involvement of their members in wealth accumulating occupations have, at various times, imposed tithing obligations. The earliest example of such a decree is that of the Council of Mâcon in 585AD which threatened excommunication for those who failed to tithe as required. The very perception that such a penalty should be necessary suggests widespread failure to give up accumulated wealth. This might reflect also a lack of trust in church institutions to use the money appropriately. The inherent problems of such a system, evident

in ecclesiastical history, are elucidated by van Kersbergen (1995) who suggests that where ‘almsgiving was regulated by institution [and] mediated by the religious hierarchy’, it turned into ‘one of the prime penances for sin’ such that ‘charity lost its original meaning and the idea of making sacrifices for the sake of love disappeared’. To a similar extent, the notion of tithing has been viewed negatively according to its perceived return to an Old Testament institution that smacks of legalism. This is early evident in Irenaeus (AH) who contrasts Jewish tithing with the potential joy of giving everything on account of the hope which Christians possess. Tithing, as part of the Law, has been understood to be superseded in Christ according to the teaching of the New Testament. So Paul advises the Corinthians, ‘Each of you must give as you have made up your mind, not reluctantly or under compulsion, for God loves a cheerful giver’ (2 Cor. 9.6). Similarly in 1 Cor. 16.2, no determined amount or percentage is suggested for the Corinthians in regard to the ‘collection for the saints’. There are also many contemporary cases of the problems surrounding compulsory Christian tithing and its abuse in relation to poorer members of congregations (Sataline, 2007).

Instead then, if church members are called to different services according to their gifts (e.g. Eph. 4, Rom. 12), and to give according to the prompting of the Spirit, then it seems that the individual should determine their own level of giving in relation to their created wealth. This coheres with the actions of the disciples who ‘determined that according to their ability, each would send relief to the believers living in Judea’ (Acts 11.29). An individual who is a ‘shrewd capitalist’ and spends more time in such activity might thus properly contribute a greater percentage of his wealth since he has more disposable income (1 Tim. 6:17-19). This is not to contradict Jesus’ teaching of the story of the generous widow (Lk. 21.1-4), but is merely to observe that certain individuals have more money to give to promote the mission of the Church than others, according to their skills and position.

3 Model

Economists have modelled the allocation of time between between factors of production on the assumption that individuals seek to maximise their utility (Becker, 1965). These models have developed to incorporate a religious element on the basis that households derive satisfaction from participating in religious activities. Azzi and Ehrenberg (1975) explore how perceived after-life benefits may influence the allocation of time and money resources towards religious activities. Sullivan (1985) examines the free-rider problem, whereby an individual may be tempted to enjoy the benefits of religious commodities without contributing financially towards them. Iannaccone (1997) derives a set of equations predicting the well documented phenomena that the distribution of financial contributions to the church are right skewed. In addition, Iannaccone (1997)’s model shows that as the purchase of religious commodities is a function of time and money, those who are time poor and money rich

will substitute direct religious activities, such as church attendance, with financial giving.

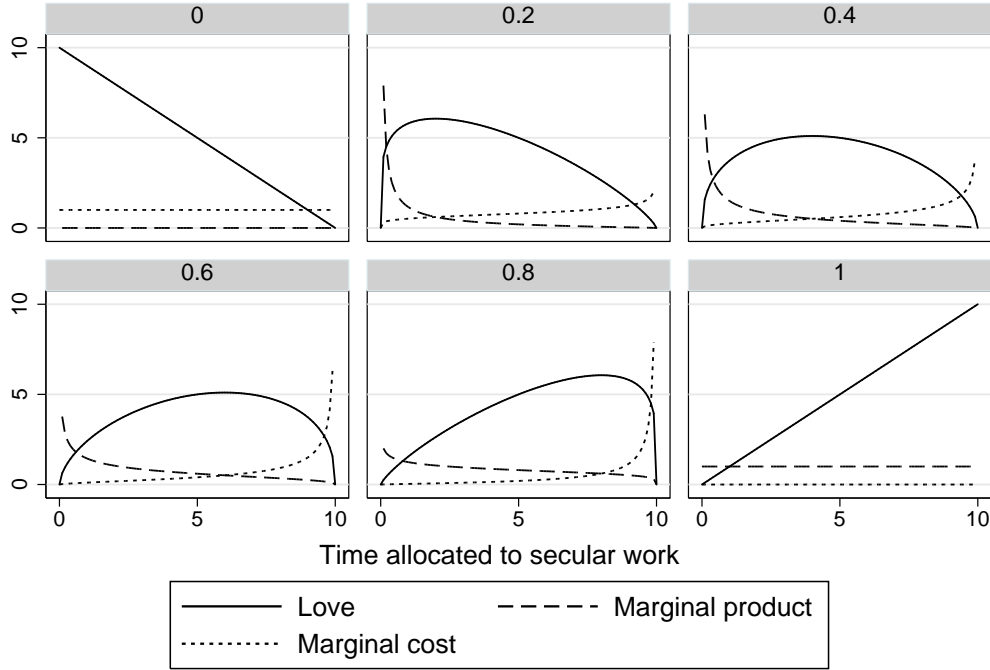
Consistent with Iannaccone (1997)'s model, we maintain that church output is a function of time and money inputs. However, we approach the problem from a slightly different perspective. We begin with the optimistic assumption that Christians allocate time in order to maximise the output of the church, not their own satisfaction. This is the state to which Christians should aspire given the central focus in Jesus' teaching on the Kingdom of God which consists in the people of God following his will. In the Old Testament, Israel are exhorted to '...be holy, for I the LORD your God am holy' (Lev. 19:1b), and this theme is developed in the Sermon on the Mount where Jesus teaches his disciples to pray to the Father, 'your will be done, on earth as it is in heaven' (Mt. 6:10). Indeed in this same section of Matthew we hear Jesus speaking, in effect, against a primary motivation of wealth accumulation, advocating instead the primacy of doing the will of a God who provides for the needs of his people. Thus, following warnings against serving both God and money (Mt. 6:24), and worrying about earthly possessions (v.25), Jesus exclaims, 'strive first for the kingdom of God and his righteousness, and all these things will be given to you as well' (Mt. 6:33). However, given that we have a practical interest here in the present reality of the imperfect earthly church, we later relax our initial optimistic assumption to allow the influence of sin to diminish church output.

3.1 Angel State

We are interested in modeling the advancement of the church's mission in the world denoted L in equation 1. We propose that L is increasing in the time and money allocated to the church by individuals. However, money is created by allocating time into work which reduces time allocated to direct church service. We begin with the sinless, angel-like state in which individuals seek to maximise L .

$$L = \sum_{i=1}^N \{C_i^{\alpha_i} D_i^{1-\alpha_i}\} \quad (1)$$

In equation 1, an individual (i) can allocate their time (Γ) between secular work (C_i), which generates money for the church, and direct church activity (D_i). α_i represents the sensitivity of L to changes in the time allocated to work, known as an elasticity in the economics literature. This elasticity will vary within a congregation as some individuals are more adept at converting their time into money than others. However, these individuals are relatively less gifted in direct church activity. We assume each individual has knowledge of their own α . Therefore, each individual can allocate time to optimise their contribution to L , given their elasticity. Equation

Figure 1: **Optimisation of the Church's mission in the World**

Graphs by secular work elasticity

2 provides the solution to this optimisation problem. Further details are provided in the appendix.

$$\alpha C^{(\alpha-1)}(\Gamma - C)^{(1-\alpha)} = (1 - \alpha)C^\alpha(\Gamma - C)^{-\alpha} \quad (2)$$

The left hand side of equation 2 represents the marginal benefit for the church of an individual allocating time into secular work (i.e. the increase in L resulting from a unit increase in C). The right hand side of equation 2 is the corresponding marginal cost which is also the marginal benefit of direct church activity. This is consistent with the intuition that reduced input into direct church activity is the opportunity cost (the forgone alternative) when an individual allocates time to making money in a secular institution. L is optimised when the marginal benefit of allocating time to work equals the marginal cost⁶. This is illustrated in figure 1.

Figure 1 shows that as an individual becomes more skilled at making money at work relative to working for the church directly, the amount of time the individual should allocate to secular work in order to optimise L increases. Equation 2 will simplify to:

⁶Other than at the extremes where marginal benefit does not meet the marginal cost curve.

$$C = \Gamma \alpha \quad (3)$$

Therefore, holding the available time resources (Γ) constant for each individual, the secular work elasticity (α) will determine the optimal level of L . As such, the church will do best if individuals split time between secular work and church work on the basis of their secular work elasticity. This might prompt a rethink regarding expectations of duty and service from church members. Perhaps millionaires should not waste time putting the chairs away after the service when they could be creating the necessary finance to fund mission.

By way of further illustration, we can imagine two scenarios. In the first, individuals are allowed to freely allocated time between work and direct christian service. In the second the church requires a minimum level of direct service from its members, in effect capping the amount of time the congregation has to work and make money for the church. Such a requirement is likely to be administered through a mixture of social and emotional pressure from the congregation towards those who are deemed not to be pulling their weight. To compute our results, we will let our church have 101 individuals, the first with a money elasticity of 0 and all others with an elasticity of 0.01 greater than the last, so that the final individual in our church has a money elasticity of 1. Assuming a different distribution of elasticities within the church would affect the magnitude of our results but not the qualitative conclusion.

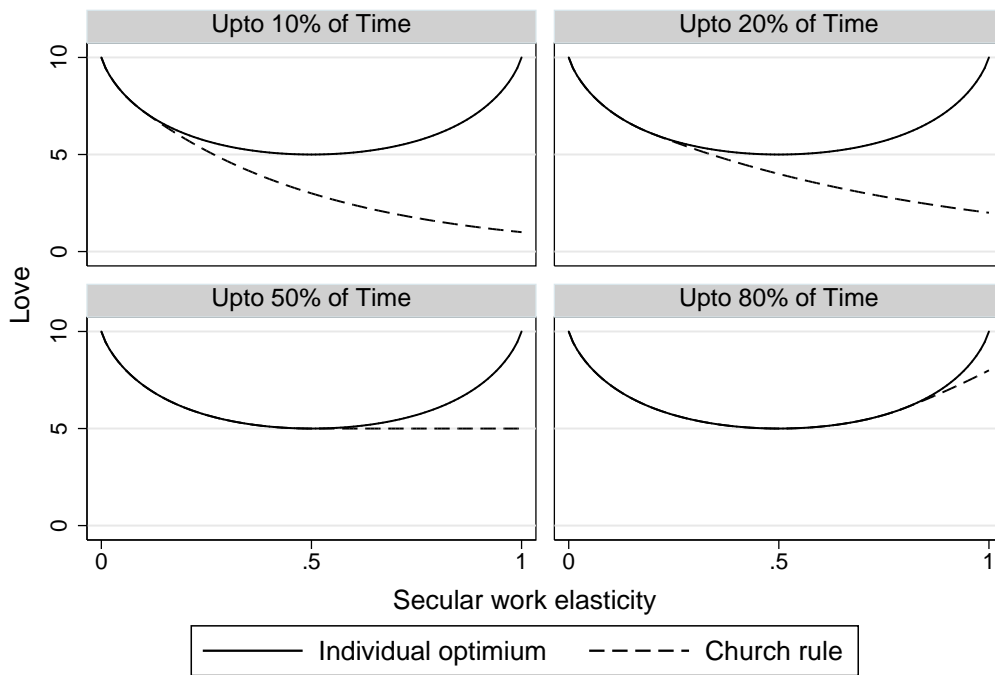
Figure 2 shows that if church members behave like angels, allowing them to freely allocate their time between work and direct service always dominates the church caps on secular working. Indeed, as the church rule becomes more restrictive and as an individual's secular work elasticity (α) increases, the more the advancement of the Church's mission is impeded. Thus, a gifted money maker will contribute less to the church, if the church occupies all his time.

3.2 *Sinful State*

The implications of the results in section 3.1 provide support for the libertarian view that allowing individuals to optimise their own time and effort, will generate the first best outcome. As such, any attempt by the church to limit the individual's choice will, at best, have no effect and at worst entirely prevent the individual contributing to the advancement of the Church's mission in the world. The results of the model must, however, somehow account for the effect of sin in relation to the creation of wealth.

'The lover of money will not be satisfied with money' writes the author of Ecclesiastes (5.10) and that the snare of idolatry lies along the path of capitalism is emphasised by Jesus' teaching that, 'You cannot serve God and wealth' (Mt. 6.24,

Figure 2: Angel Optimisation vs Church Rules



Graphs by church rule: Amount of secular work permitted

Lk. 16.13)⁷. Similarly, in the gospel of Luke, the eponymous rich fool of the parable is shown to be acting sinfully in planning to tear down his old barns and build bigger ones in which to store up his wealth (Lk. 12.13-21). Here wealth accumulation and materialism are seen to proceed hand in hand, with a selfish individualism evident in the acquisition and retention of possessions summarised by the maxim, ‘Take life easy; eat, drink and be merry’ (Luke 12.19, NIV). As the Archbishop of Canterbury expounded in his Easter Sermon, ‘as individuals [we] can’t contemplate an end to our acquiring,’ and our ‘selfish, controlling, [and] greedy habits’ are indicative, he suggests, of a widespread failure to acknowledge death (Williams, 2008). This is, in turn, sinful in its implicit rejection of the true life to which we are called in Christ and which provides hope beyond death. We should be building in heaven not on earth (cf. Mt. 6.19-21) and excessive retention of wealth can indicate only earthly construction. This is illustrated most clearly in the story of the rich young ruler, the retention of whose possessions when called by Jesus to give away all he had, prevented his embracing the kingdom of God (Mk 10.17-30). Furthermore, the

⁷cf. 1 Tim. 6.9-11: ‘But those who want to be rich fall into temptation and are trapped by many senseless and harmful desires that plunge people into ruin and destruction. 10 For the love of money is a root of all kinds of evil, and in their eagerness to be rich some have wandered away from the faith and pierced themselves with many pains.’

same problem presents itself acutely in the present day such that the Vatican felt obliged to include ‘excessive wealth accumulation’ in a recently updated list of seven ‘mortal’ sins for the modern world.

In this respect, then, the accumulation of excessive wealth implies greed but also prevents created wealth being used for the advancement of the Church’s mission⁸. Consequently in our model we assume that an increasing degree of wealth retention relates to increasing levels of ‘sin’ on the part of the individual. Therefore, we relax the assumption that individuals give back all of their created wealth to the church. A proportion of wealth, σ , will be retained by the individual and hence does not contribute to L . Direct Christian activity, however, will be unaffected by σ . We incorporate this possibility into our model as follows:

$$L^* = \sum_{i=1}^N \left\{ \frac{AC_i^{\alpha_i} (\Gamma_i - C_i)^{(1-\alpha_i)}}{C_i^{(\alpha_i \sigma_i)}} \right\} \quad (4)$$

L^* represents the love remaining after each individual has retained the proportion σ_i of their wealth created for themselves. The extent to which L^* will differ from L will depend on α , σ and C . As before, C_i will be determined by α_i or the church’s cap on working. If σ_i or α_i equal zero, then $L_i = L_i^*$. As $\sigma_i \rightarrow 1$ and $\alpha_i \rightarrow 1$; $L_i^* \rightarrow A(\Gamma - C_i)^{(1-\alpha_i)}$. As a result, the church would prefer individuals to invest more time in direct service and less time creating wealth than would arise if the individual was allowed to choose C , particularly when σ is large.

Ideally, the church would know α_i and σ_i for each individual and hence be able to optimise L^* . Choosing C to optimise L^* leads to the expression:

$$C_i^* = \frac{\alpha_i \sigma_i \Gamma_i - \Gamma_i \alpha_i}{\alpha_i \sigma_i - 1} \quad (5)$$

See appendix for derivation.

Equation 5 shows that the optimal choice of C_i to maximise L^* partly depends upon σ_i . When $\sigma_i > 0$ the free individual optimisation point given by $C_i = \Gamma_i \alpha_i$ (see equation 3) will be less than the optimal choice for L^* . Therefore it is possible for the church to improve upon the free individual optimisation point when $\sigma_i > 0$. To illustrate this graphically, figures 3 and 4 compare the optimisation of L^* when equation 5 is satisfied against the returns for $C_i = \Gamma_i \alpha_i$, the point individuals would freely choose. As σ and α are increased, the difference between the two points increases. The church can do better than allowing individuals to choose C when $\sigma > 0$.

It is unlikely that the church will know each individual’s α and σ and hence it is unlikely to be able to maximise L^* . Rather, we repeat the analysis in section 3.1

⁸cf. 1 Jn 3.17: ‘How does God’s love abide in anyone who has the world’s goods and sees a brother or sister in need and yet refuses help?’

Figure 3: **Optimisation of L^* : Low Sigma**

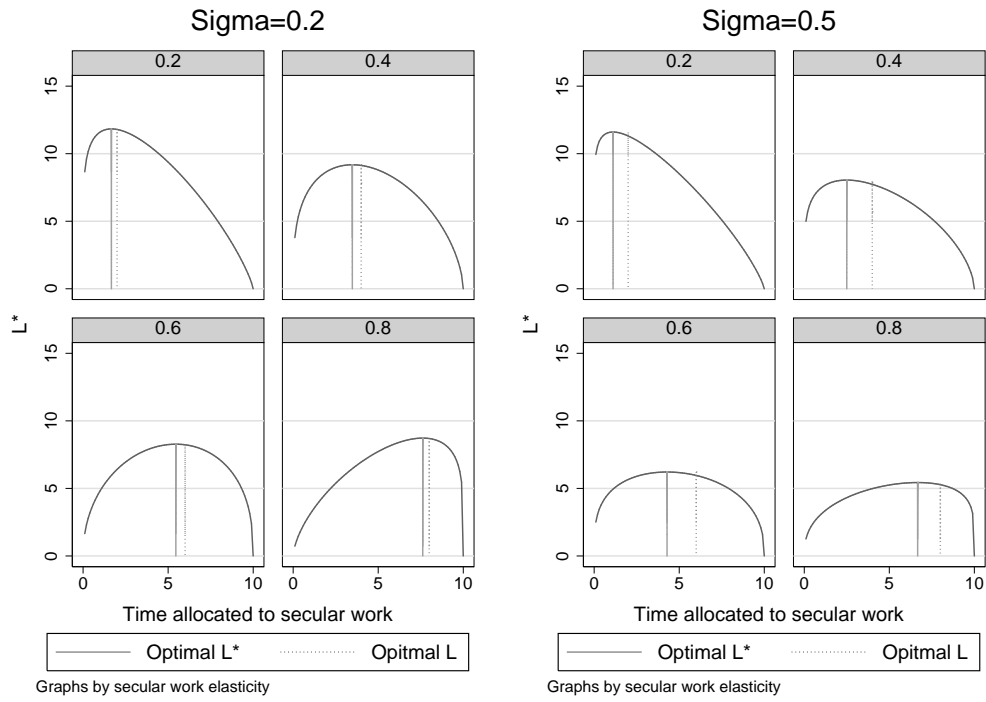


Figure 4: **Optimisation of L^* : High Sigma**

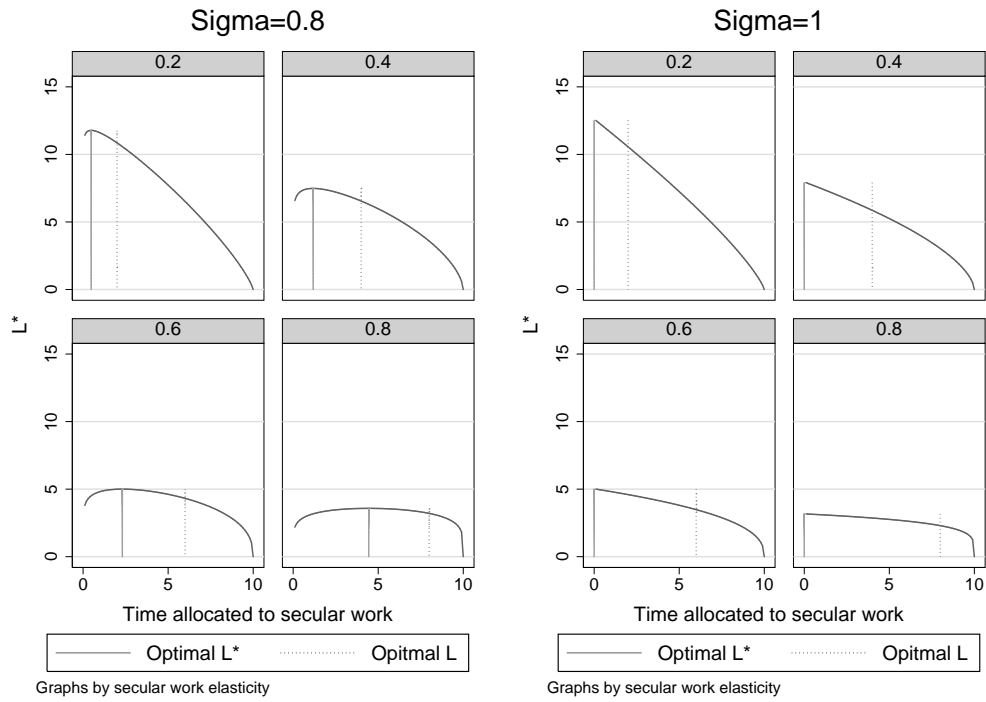
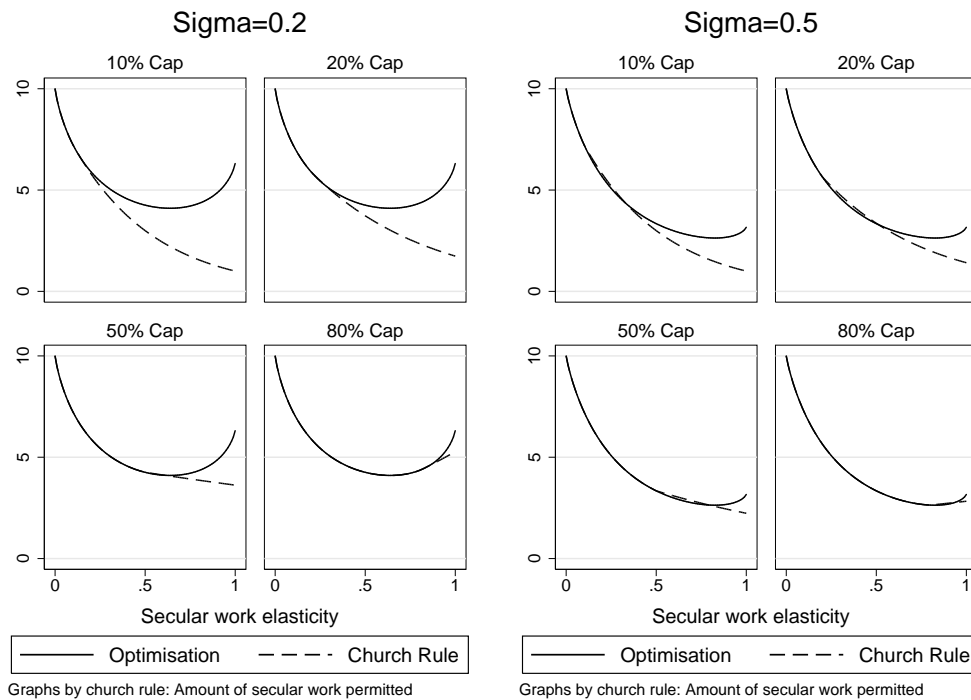
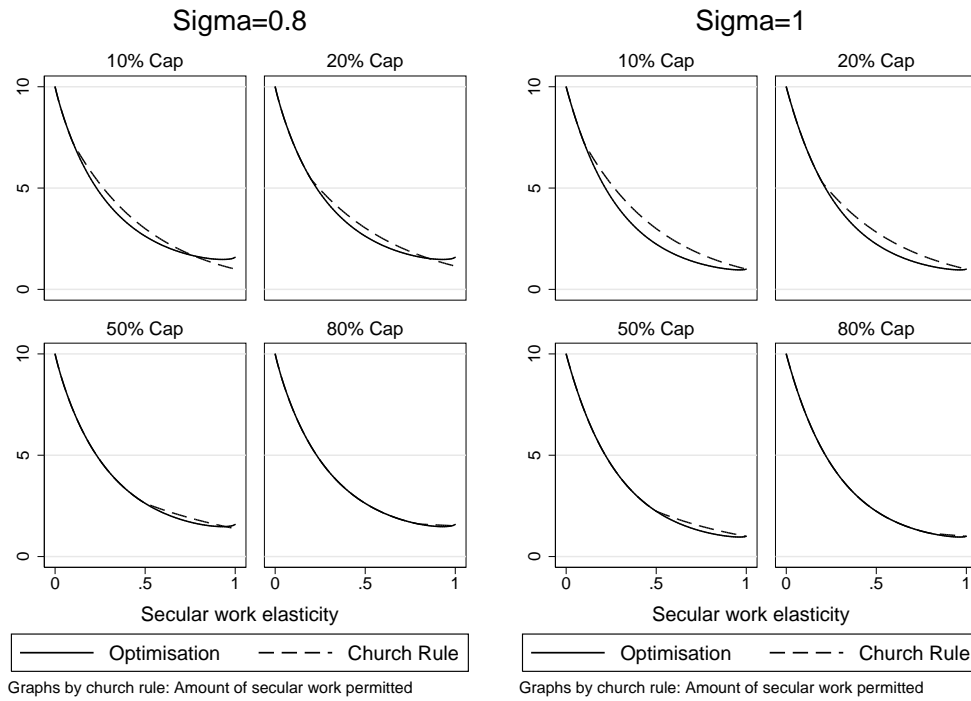


Figure 5: **Optimisation vs Church Rules: Low Sigma**

comparing levels of L^* when individuals are free to optimise C against various work caps. Figures 5 and 6 show that when σ is large, the church is able to improve upon the individual optimising point by establishing a minimum level of church service. Consequently, if sin is a big problem, then the church might do better to require the millionaires to put the chairs away, instead of accumulating further riches for themselves. However, the extent to which the church does better is limited by the nature of diminishing marginal returns of direct service (not everybody can put the chairs away at the same time).

4 Conclusions

The model employed here sheds light on the tradeoffs associated with investing time and effort into wealth creation in secular institutions against investing that time directly in Christian activity. By applying basic economic theory, we have shown that the first best optimal strategy for advancing the Church's mission in the world would be to allow individuals to decide for themselves how best to apportion their time and effort according to their skills. This result, however, is compromised by sin such that accumulated wealth is not always directed towards Christian ministry. In this scenario, which is that of the fallen world in which we live, congregations could improve their contribution to the advancement of the Church's mission by capping

Figure 6: **Optimisation vs Church Rules: High Sigma**

the amount of time which individuals spend in creating wealth, requiring instead this resultant time to be spent directly in Christian service.

A theological scheme which is consistent with the results of our economic model is apparent in Philippians. When Paul is in chains for the Gospel, the Philippians, recognising the value of his work, sustain him in prison, and Paul's thanksgiving for their generosity frames the epistle⁹. Consequently when Paul describes the Philippians' *κοινωνία* (ESV: partnership) in the Gospel (Phil. 1.5), this term can be understood to extend to their financial gifts (cf. Rom. 15.26; 2 Cor. 8.4; 9.13 and Heb. 13.16). Such partnership in the Gospel includes the financial support of evangelists. Indeed, the Philippians recognise the value of Paul's ministry, and thus his individual vocation, to the extent that they provide support for him on more than one occasion even in Thessalonica (Phil. 4.16). That the term used is *κοινωνία*, however, implies far more than just the giving of financial support on the part of the Philippians. Through sharing their income, they are acknowledging as of foremost importance, the fundamental task of the proclamation of the Gospel. Fee (1995) argues that whilst the basic sense of *κοινωνία* here is the Philippians' participation in Paul's proclamation of the Gospel according to their financial support, 'Paul's greater concern in this letter is with the Gospel in Philippi. This is the "partner-

⁹See (Peterman, 1997) for a discussion of the significance of this structure and, in particular, the parallels between Phil. 1.3-11 and 4.10-20.

ship” in the Gospel that concerns him’. Thus not only the act of their financial support but also their own declaration of Christ and imitation of Paul builds this desired partnership in the proclamation of the Gospel (see Phil. 1.7; 3.10). Bockmuehl (2004) suggests that the spiritual nature of the Philippians’ partnership with Paul in the Gospel ‘found its concrete expression both in the Philippians’ participation in the task of proclamation... and in their repeated financial contributions to Paul’s mission’. So Lightfoot (1953) suggests the Philippians partnership in the Gospel, ‘denotes co-operation in the widest sense, their participation with the Apostle whether in sympathy or in suffering or in active labour or in any other way’. It is in this interaction of giving and direct service that partnership in the Gospel can be realised more fully and, furthermore, this ensures that the gift which results from one’s employment does not become divorced from its purpose in the proclamation of the Gospel of Christ.

Paul as the apostle to the Gentiles, and having received the grace of God to undertake such a task, focuses on this ministry but devotes a portion of his time to tent-making in the interests of raising capital for his primary task. Conversely, those skilled in wealth accumulation and devoting large amounts of time to this enterprise are, on the one hand, engaged in partnership in the proclamation of the same Gospel by donating this wealth to the church, but such partnership can be realised in a fuller sense by engaging also in direct Christian activity. Not only does this contribute to maximising the Church’s mission, but allows for growth into Christian maturity (cf. Eph. 4.11-13), both limiting the opportunity to generate and retain large amounts of wealth and increasing understanding as to the negative and sinful aspects this can entail.

Our model assumes a mutually exclusive dichotomy between wealth creation and direct Christian activity. We must also acknowledge, however, those aspects of the Church’s mission which can and do take place within the secular institutions in which Christians work, and which we cannot quantify in the same way that we quantify income generated from such employment. It is possible to conceive of scenarios in which the advancement of the Church’s mission and the creation of wealth occur simultaneously, drawing on the notion of the ‘cultural mandate’ and the pre-lapsarian task of ‘work’ to which humanity was appointed (cf. Gen. 1.26). The extent to which secular work might be considered as Christian activity or indeed ‘worship’ is nevertheless contestable, and a debate worthy of the subject matter is beyond the scope of this paper. We assert here that the primary mechanism by which ‘work’ directly advances the Church’s mission is not through the work itself but through relationship established in the workplace. Many Christian ministers must long for the particular opportunities Christians in the work place have to build and develop long term relationships with their colleagues. Yet, in regard to our model, we maintain that whilst relationships are forged during working hours, Christian activity generally takes place in the time which is not governed by the particular constraints of work, such as in the lunch ‘hour’, or resultant social interaction. For instance an invitation to attend a church service will, more likely, be made during

a coffee break than a contract negotiation. Similarly, counsel might be offered not at a desk but on the journey home from the office. Such time then is not directed towards creating wealth and thus our dichotomy remains, but should not serve to undermine the efforts of those who advocate mission in the workplace (see, e.g., www.christiansatwork.org.uk). Indeed we would treat such efforts as direct Christian activity in our model. This also serves to emphasise the need for a diverse range of activities to be undertaken by church members, and that the presence of some individuals in secular institutions required by our model in terms of the creation of wealth, might be considered necessary also in terms of the wider aims of the Church in its mission.

Whilst this is not the place to explore in depth the option or indeed the very possibility of withdrawing entirely from a capitalist system (Goodchild, 2007), the model demonstrates that some investment of human capital to wealth creation benefits the advancement of the Church's mission. For there to be a Christian presence and witness in societies which operate in such a way, it seems that we must attempt to ascertain how best to serve Christ within these parameters, whilst being constantly aware of the potential snares to our sinful nature which are inherent in earning money within secular institutions. The fact that the effects of sin can be only loosely represented in this model is symptomatic of its very insidious and yet ravaging nature, and this is why, though we are not bound in Christ by any legal requirement according to which we direct our time and effort, we might usefully suggest the way in which they can be used most effectively within an economy for all of us whose spirit is willing but whose flesh is weak. The imposition of any measure in this regard, as demonstrated for tithing, has both theological and corresponding practical problems relating to the inescapable effects of sin. So, for example, the stewardship of money by the church might be inefficient or even corrupt according to the church's failure to use it effectively in relation to the proclamation of the Gospel. Indeed, further exploration of the impact of potential misuse of finance by the church might be a worthwhile extension of the model used in this paper.

This model facilitates consideration of the way in which individual wealth can be considered more broadly, with the church akin to the extended family provided for under Old Testament tithing regulations, to whom a portion of income is assigned. This corresponds then to the notion of the Church universal as the body of Christ. Individual wealth accumulation might be viewed corporately to the extent that each church member contributes to the upkeep and outreach of the Church family, united in common purpose. We have seen that the optimisation of the Church's mission relies on each individual being aware of his own elasticities (see section 3.1 above) but subsequently also the implications of his sin (section 3.2) in relation to the retention of wealth and its impact on the advancement of the Church's mission. It is in this latter case where a church rule might seem to effectively optimise productivity. The giving of ourselves to Christian service however, should be based not upon compulsion in regard to external caps upon the way we use our time, but on the injunction to build for heaven, being 'rich towards God' (Lk. 12.21), rather than

storing up earthly treasures. It is significant then that the act of direct Christian activity corresponds also to an emphasis upon building in heaven in place of the earthly accumulation of wealth. The capitalism cap promotes this in limiting time spent in secular institutions and encouraging such time to be spent instead in direct Christian activity. The notion of such a cap, however, is to be considered formative rather than normative and understood not as a harking after legalism but as indicative of both our fallen nature in relation to the pitfalls of wealth accumulation, and an aid to recognition of the necessary and valid contributions of all members of a congregation. In this way, the results of the model serve as an effective tool in representing the way in which the skills and hence resources of individuals in the church might be most profitably utilised to serve the Church's mission as the family of Christ together.

The interaction in this paper between strains of libertarianism and legalism is representative of the constant tension for those who, though living not under the Law of the covenant but in free obedience to the 'law of Christ' (Gal. 6.2), are nevertheless 'of the flesh'. It is fitting then that the results of this model should be considered in the light of both Paul's words of thanksgiving for the Macedonians who, in respect to their financial giving, 'gave themselves first to the Lord' (2 Cor. 8.5) and also his words of encouragement to the Corinthians: 'Therefore, my beloved, be steadfast, immovable, always excelling in the work of the Lord, because you know that in the Lord your labour is not in vain' (1 Cor. 15.58). Such advice applies equally to both types of white-collar worker, to those involved in full-time ministry and those working in secular institutions; it is not ecclesiastical compulsion but the desire to labour effectively for the Lord which should be our primary aim and fully inform the use of our time and skills.

Appendix

A.1 Equation 1

We use the Cobb-Douglas 1928 production function for two reasons. Firstly, it features diminishing marginal returns to each factor of production which is consistent with our theological position and standard economic theory. Secondly it exhibits desirable mathematical characteristics making computation tractable. For simplicity, we assume constant returns to scale so $\alpha_i + \beta_i = 1$ and we constrain both α_i and β_i between 0 and 1. A is a constant term greater than zero so that L is positive.

$$L = \sum_{i=1}^N \{F(C_i, D_i)\} = \sum_{i=1}^N \{AC_i^{\alpha_i} D_i^{\beta_i}\} = \sum_{i=1}^N \{AC_i^{\alpha_i} (\Gamma_i - C_i)^{(1-\alpha_i)}\} \quad (\text{A.1})$$

Therefore we wish to maximise L with respect to C , subject to Γ and α :

$$\max[L|\Gamma, \alpha] = \max[AC^\alpha (\Gamma - C)^{(1-\alpha)}|\Gamma, \alpha] \quad (\text{A.2})$$

The solution to equation A.2 is to choose C to so that the first derivative equals zero:

$$\begin{aligned} L'_C &= 0 \\ A\alpha C^{(\alpha-1)}(\Gamma - C)^{(1-\alpha)} - A(1-\alpha)C^\alpha(\Gamma - C)^{-\alpha} &= 0 \\ \alpha C^{(\alpha-1)}(\Gamma - C)^{(1-\alpha)} &= (1-\alpha)C^\alpha(\Gamma - C)^{-\alpha} \end{aligned} \quad (\text{A.3})$$

This equation can be simplified as follows:

$$\begin{aligned} \alpha C^{(\alpha-1)}(\Gamma - C)^{(1-\alpha)} &= (1-\alpha)C^\alpha(\Gamma - C)^{-\alpha} \\ \frac{\alpha(\Gamma - C)}{C} &= (1-\alpha) \\ \frac{\Gamma}{C} - 1 &= \frac{1}{\alpha} - 1 \\ C &= \Gamma \alpha \end{aligned} \quad (\text{A.4})$$

Hence, holding total time equal, the amount of time allocated to work in order to optimise L is determined by α .

A.2 Derivation of Equation 5

$$\begin{aligned}
 L^* &= AC^\alpha(\Gamma - C)^{(1-\alpha)}C^{(-\sigma\alpha)} \\
 \frac{\delta L^*}{\delta C} &= (\alpha - \alpha\sigma)AC^{\alpha-\alpha\sigma-1}(\Gamma - C)^{(1-\alpha)} - (1 - \alpha)AC^{(\alpha-\alpha\sigma)}(\Gamma - C)^{-\alpha}
 \end{aligned}$$

L^* is maximised when $\frac{\delta L^*}{\delta C} = 0$

$$\begin{aligned}
 (\alpha - \alpha\sigma)AC^{\alpha-\alpha\sigma-1}(\Gamma - C)^{(1-\alpha)} &= (1 - \alpha)AC^{(\alpha-\alpha\sigma)}(\Gamma - C)^{-\alpha} \\
 (\alpha - \alpha\sigma)C^{-1}(\Gamma - C) &= (1 - \alpha) \\
 \frac{\Gamma}{C} - 1 &= \frac{1 - \alpha}{\alpha - \alpha\sigma} \\
 \frac{\Gamma}{C} &= \frac{1 - \alpha\sigma}{\alpha - \alpha\sigma} \\
 C &= \frac{\Gamma(\alpha - \alpha\sigma)}{1 - \alpha\sigma} \\
 C &= \frac{\alpha\sigma\Gamma - \Gamma\alpha}{\alpha\sigma - 1} \tag{A.5}
 \end{aligned}$$

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