Microeconomic Applications to the Bible: An extension to Stamm's arguments in 2001

Alan Chan
Atlantic Baptist University
alan.chan@abu.nb.ca

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ABSTRACT: *Stamm (2001) suggests examples of how we can draw economic applications from the Bible. The present paper follows Stamm's idea and suggests additional examples that Christian instructors can use in an introductory microeconomics classroom.*

INTRODUCTION AND LITERATURE REVIEW

Thousands and thousands of courses regarding economic principles are offered annually at universities worldwide. Despite the wide selection of textbooks available, topics covered in these courses are more or less established. In a vast majority of mainstream microeconomic courses, material is approached in the following order: it begins with an introduction to the economic way of thinking and how to measure opportunity cost, then it moves to demand and supply analysis, elasticity, preference and utility, production and cost, and finishes with different types of market structure.

Even though we adopt more or less identical curricula, the question needs to be asked, should Christian universities teach economic principles the same way as our colleagues in secular universities?[1] Most believe Christian scholars should teach in the same way as other secular universities and add biblical supplements to course content. Stapleford (2000) suggests that Christian instructors can (and must) foster clear discussions of introductory economics that are theologically grounded. He argues that mainstream economic texts cite an extensive array[2] of ethical issues, thus providing ample opportunity for instructors to introduce ethical ways of thinking based on biblical principles. He also quotes Frank, Gilovich, and Regan's (1993) shocking finding that students completing an introductory course in mainstream economics were far more likely to be less honest at the semester's end than were students completing a course in astronomy.

There is little doubt that teaching economic principles from a Christian perspective is crucial to achieving an integration of faith and learning at Christian universities. J.P. Moreland's famous book *Love Your God with all Your Mind* argues that humankind has been created with the ability to reason, and as such, should be using this God-given capacity. The intellectual mind is a gift from God that humankind can choose to apply in various areas of Christian life. He also suggests how believers of the Christian church can recapture and integrate the use of reason with faith. However, most Christian educators have searched for feasible approaches to achieving this goal in their classrooms, but success is not easily accomplished. First of all, many Christian economists may not have adequate theological training due to their secular education backgrounds. For example, they may not have the necessary foundation in Biblical studies to present that knowledge to their scholastic field. In addition, most Christian universities accept non-Christian students and, increasingly, international students from various religious backgrounds, making the task more challenging.

North (1974) is a pioneering author in this area of research. In his book, titled *An introduction to Christian Economics*, he uses Scripture to evaluate economic concepts. Most of his work concerns topics in macroeconomics, especially monetary policy. Starting in the late 1980s, more and more scholarly papers attempted to address the relationship between economics and Christian theology. For example, Wolterstorff (1987) discusses Hermeneutical issues between economics and religion; Richardson (1988) introduces how Christian scholarship and economics overlap; Waterman(1991) links Christian theology and political economy; Dorr (1992) writes about Catholic social teaching; and, Iannocone (1998) publishes a paper introducing the economics of religion. These works have not gone without criticism. Montgomery (1996), for example, raises the practical challenge of belief formation, and calls on Christian scholars working in economics to address this issue.

Tiemstra (1993) reviews literature concerning integration of faith and economics in the 1980s and early 1990s. Important pieces also include Graham, Monsma, Sinke, and Stokey (1990), and Boersema (1999). In the late 1990s, Oslington (1999) summarizes all of the papers that have been published on this topic and provides a reading guide for more than 195 articles in the area of Christian theology and economics. Later, Oslington argues that it is neither desirable nor possible to separate economics from theology, and he identifies "theological economics" as a new and important area of study. He calls for discussions of theology that are implicit in contemporary economics, and better relations between the two disciplines.

Despite the abundance of literature regarding Christianity and economics, there are a limited number of papers that suggest practical and feasible teaching methods for secularly trained Christian economists to apply. There are biblical teachings on economic principles, but many Christian lecturers may not feel comfortable presenting them in the classroom. They run the risk of having students complain of sitting in yet another course imbued by biblical study.

Among those scholarly papers with practical teaching applications, Stamm (2001) published an article titled "Economic Applications to the Bible." In this article, Stamm uses four biblical messages that have economic applications. First, he uses Jesus' teaching on gaining the whole world, yet losing one's own soul in the process (Matthew 16:26), to explain the concept of opportunity cost. Then he uses Jacob's lentil stew (Genesis 25:29-34) to illustrate the principle of the price elasticity of demand. Next, he uses Jesus' message that he is the way, the truth, and the life (John 14:6) to demonstrate the power of monopoly. Finally, he argues that the only medium of exchange in the Lord's Kingdom is the blood of Jesus.

Stamm (2001) also argues that one of the most common mistakes made by Christian economists and business professors is attempting to make an economics-oriented interpretation of the bible. The primary intention of Scripture is to reveal Christ and his plan of redemption, and not to convey economic principles. However, professors can add biblical examples and theological ideas as they teach in their classrooms. The author believes this is one feasible teaching method that secularly trained Christian economists can use in classrooms. The major contribution of the present paper is to give additional biblical examples that can be used in introductory microeconomics. This will have the effect of showing the rich resources that Christian scholars have available to them as they endeavor to deliver economic training with biblical revelation.

Besides Stamm (2001), there are a number of other Christian scholars publishing their contributions toward the integration of economics and faith in the classroom. It appears that more and more Christian economists are studying in this field, as demonstrated by the 2002 Christian and Economics: Integrating Faith and Learning in Economic Scholarship conference held at Baylor University. Wilber (2002) discusses how to teach economics while keeping the faith. His study has primarily focused on the role of ethics in economic theory. Recently, Koch (2007) published an article on the use of biblical metaphors in teaching economics; his paper contains an excellent review of scholarly publications in this area of interest. Hoover (1998) illustrates how to use Scripture to examine different types of microeconomic models of market structure and suggests some pragmatic approaches for Christian business to be involved in the world without being of the world.

This paper attempts to amend Stamm's (2001) argument on economic principles derived from Scripture, with a focus on microeconomics. Having taught introductory microeconomics in a small liberal arts Christian university, faculty regularly considered the question of how to integrate economics with Scripture. Not only has the goal been to help students understand both the specific passage and the economic principle presented, but also to challenge them to integrate and enrich their knowledge in the areas of both economic theory and biblical understanding.

TEACHING APPLICATIONS

Demand and Supply Analysis

The basic idea of demand and supply analysis is that quantity demand is decreasing in price, and quantity supply is increasing in price. Equilibrium price and quantity can be found by calculating the point of intersection between the supply and demand curves. For example, in the Old Testament, after Joseph was sold to the Egyptians, God miraculously positioned him as the prime minister of Egypt. God told Joseph that a famine was coming and that food should be stored for the next seven years (Genesis 45:5-11). This implies the idea of buffering agricultural products. Non-perishable crops can be stored to create a buffering mechanism which stabilizes price and food supply. This act makes the price and quantity of transacted crops stable.

Another example of supply and demand is from the gospel of Matthew, Chapter 20:1-16. This is the parable of workers in the vineyard. The owner of the vineyard hired different workers to work for him at different times of the day. The laborers who worked one hour of the day received the same compensation as those who worked for eleven. Jesus uses this scripture to describe the attitude of work in the Kingdom; he examines our heart and values us according to our attitude. This idea is reflected in lump sum pricing, where once you have paid an entrance fee, you can enjoy all you want.

Price Elasticity of Demand/Opportunity Cost

Stamm (2001) uses Jacob's lentil stew to illustrate the idea of price elasticity of demand. Here, the author suggests another example: contemporary Church attendance. The Bible teaches us not to stop worshipping together in the book of Hebrews, but the frequency of contemporary church attendance, sadly, is a function of the opportunity cost of attending church. If worship starts too early, or is too lengthy, there is a higher rate of absenteeism. For example, students tend to miss church before examinations, and accountants tend to miss worship during tax season. This follows the law of demand: as the price of attending church increases, the quantity of demand decreases. Under this setting, the demand for Sunday worship is more elastic if the percentage-decreases in attendance are more than the percentage-increases in opportunity cost. In smaller, traditional churches, the demand for Sunday worship is more inelastic than in larger, more contemporarily styled churches. The demand for Sunday school is likely to be more elastic than the demand for Sunday worship, and the demand for Sunday school is also likely to be more elastic than the demand for prayer meetings.[3]

Efficiency and Equity

Christians believe Jesus Christ is the sole provider of salvation. In other words, Jesus is a monopolist, but he provides marginal cost pricing. Obviously, he cares about social welfare. In the Apostle Paul's teaching, a church is not a building, but a congregation of Christ's followers. He also mentions that different Christians have different roles, and together we form the body of Christ. In the first book of Corinthians (12: 7- 26), Apostle Paul talks about the unity of Christians. He mentiones that different parts of the body have different roles; this parallels the idea of specialization in economics. We seek the best way to minimize average total cost through specialization.[4] The division of labor, however, is based on gifts given by God. This can be applied to the economic principle of absolute advantage. However, since everybody within the congregation should have a role in his ministry, this can also be applied to the concept of comparative advantage. With specialization, we can consume at a point outside of our production possibility frontier and achieve more together. Similarly, this is just like having pastoral staff, with different talents from God, specializing in ways that bring more people to Christ.

Possibility, Preference, and Choice

Many would agree that economics is a study of choice. In fact, the Bible gives many distinct choices that we have to make in our daily devoted lives. For example, we need to choose between the Lord and money (Matthew 6:24).

> 24 "No one can serve two masters. Either you will hate the one and love the other, or you will be devoted to the one and despise the other. You cannot serve both God and Money." (New International Version)

We must choose between investing in our contemporary world and eternal life (Matthew 6: 19-21).

> 19 "Do not store up for yourselves treasures on earth, where moth and rust destroy, and where thieves break in and steal. 20 But store up for yourselves treasures in heaven, where moth and rust do not destroy, and where thieves do not break in and steal. 21 For where your treasure is, there your heart will be also." (New International Version)

However, the example the author believes to be most intriguing is the famous parable of talents (Matthew 25: 14-29). The master gave three servants different lump sums: five, two, and one. The servants with five and two talents doubled the principal, while the servant with one talent dug a hole and hid the money. When the master returned, he praised both servants for doubling their principal and judged the last servant to be wicked and lazy for returning only what was given to him. This metaphor teaches us not to hide our talents, but to invest them so that they can accomplish good things for his kingdom. This passage can be translated to the following production function: , where x is the amount of inputs, and is the amount of effort. The faithful servants applied their maximum effort, i.e. e=1, and their investment doubled. The lazy servant applied zero effort, i.e. e=0, and the investment stayed the same. This passage also reveals that the preference of Christians may not be monotonic gains; rather, their preference is monotonic attitude and effort. For instance, Christ's utility function can be a simple function that is monotonic in efforts, i.e. . Besides, for Christians whose primary objective is to glorify God, they should have lexicographic types of preference. Their utility functions should be strictly increasing with both rewards in heaven and the contemporary world, but they will trade everything in the contemporary for any slight increase in heavenly rewards.

Market Structure

When immigrants first came to Canada, one of the first questions they may have wanted to ask is why are there so many different denominations within Christianity? Further, they may have asked why there are so many churches in one community under the same denomination? Churches can be seen as decreasing cost firms: the larger the congregation, the smaller average cost of supporting pastoral staff. Therefore, having more churches in a neighborhood will not help them economically. The author proposes that having more than one denomination represented in a community follows the principle of franchising. If we have only one church in a community, it is not as efficient as having two churches, at opposite ends. The practice of franchising is imminent, and one can easily see more than one McDonald's, Walmart, or other giant retail chain scattered across communities. The presence of different denominations is just like having different suppliers of the same good: Christian Biblical teaching. Even though we have different service providers, strategically locating churches in different communities can effectively enhance the visibility and marketability of the good or service provided. In other words, it creates a greater demand for the product, in turn, providing greater good for the Kingdom of God. Besides, the problem of free-riding[5] is also documented in the literature. Attending a smaller church gives individuals more opportunity to serve and grow, while in larger congregations, the per capita contribution may be less than it is in smaller congregations.

For example, in Atlantic Canada, which consists of four different provinces, there are 542 different Baptist Churches. With membership data provided from the Atlantic Baptist Convention, the four firm concentration ratio and Herfindahl-Hirschman Index of Baptist churches in the Maritimes for 2006[6] are as follows:

	Herfindahl-Hirschman Index	Four Firm concentration Ratio
In terms of Giving	65.57	9.20%
In terms of Membership	32.17	5.28%

This implies that the market structure and level of competition is very high in Atlantic Canada; however, if we just look at one province, PEI, which consists of 23 Baptist churches for instance:

	Herfindahl-Hirschman Index	Four Firm concentration Ratio
In terms of Giving	1051.07	55.97%
In terms of Membership	1172.04	57.06%

The data implies the level of local competition has increased significantly. It is more of an oligopolistic/monopolistic competitive market structure. In the city of Halifax, there are 32 Baptist churches. The numbers are as follows:

	Herfindahl-Hirschman Index	Four Firm concentration Ratio
In terms of Giving	1369.03	63.09%
In terms of Membership	579.64	35.53%

Interestingly, it could be argued that the level of competition is higher in terms of membership, but lower in terms of giving when one analyzes data from one community rather than provincial or regional figures.

CONCLUSION

Despite the abundance of literature in the area of economics and Christianity, there are a limited number of papers focusing on simple, yet practical teaching methods that secularly trained economists can use. In the current paper, the author extended Stamm's (2001) ideology regarding biblical examples as means for integrating faith and economics in the classroom. The current paper attempts to give additional examples of how Christian Scripture and practice may be used to supplement student understanding of basic microeconomic principles. As Stamm has reminded us, the primary intention of Scripture is to reveal Christ and his redemptive plan. My examples, though they are not fully developed, contribute by providing additional passages that can be used to explain microeconomic principles in a way that may be helpful for secularly trained Christian economists. In addition, these passages can provide challenges to the students who believe there is no common ground between practical economic principles and Holy Scripture.

ENDNOTES

[1] In fact, determining how to integrate faith with teaching is one of the assignments given by our department in 2008.

[2] For example, Stapleford discusses discouraged workers, social costs of unemployment, welfare reforms, minimum wage policies, illegal drugs and crimes, black markets and moral hazards, to mention a few.

[3] Thanks to an anonymous referee, who pointed out that microeconomics can be prescriptive: meaning that church leaders can act as a governing authority to help bring churches closer to Christ.

[4] But, sadly, we are not usually motivated to minimize costs by contributing our specialization effectively.

[5] When a congregation's size increases, it's per person donation and participation factors decrease. This phenomenon is known as "free riding" in academic literature.

[6] I want to thank Bruce Fawcett and the Atlantic Baptist Convention for providing the dataset. There are 540 local churches associated with the convention in 2006.

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