Econ 110: Learning to Think Like an Economist
Professors and students discuss the 110 experience.
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Economics as a Science
What makes economics a science?
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Socialism vs. the United Order
A comparison of socialism and the United Order.
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From Professor Jim Kearl:

From Professor Val Lambson:

From Professor James McDonald:

Some econ classes have a reputation for pushing students to their limits. The professors know this. Here are some of their tips for success.

**ECON 110 - Principles of Economics**
From Professor Jim Kearl:
- Prepare ahead of time for class discussion.
- Try to get the "big picture" and then fit the details in place.
- Take notes while you read, but in your own words; don't just copy material from the textbook.
- Schedule time each week to work on homework.
- Pause what you are studying with others.
- Focus on learning how to apply economics, not on learning about economics.

**ECON 378 - Statistics for Economists**
From Associate Professor Scott Bradford:
There's no secret formula here, but students who do all of the following get A's.
- Do keep a positive attitude—there is nothing as useful as good theory.
- Do look for a project (for which you have a passion) with data early in the semester.
- Do visit with your T.A. or professor about questions you have.
- Before every test, review the handouts and class notes. Be sure that you understand each concept and see how it all fits together.

**ECON 388 - Introduction to Econometrics**
From Professor James McDonald:
Econometrics is easy, econometrics is fun, econometrics is your friend, and econometrics is romantic.
The Five Do's:
- Do keep up with the material, maybe even scan new material before the lecture.
- Do your homework as soon as possible (remember the dangers of freeriding).
- Do attend class each day and take careful notes.
- Do visit with your TA or professor about questions you have.
- Do look for a project (for which you have a passion) with data early in the semester.
- Do keep a positive attitude—there is nothing as useful as good theory.

**ECON 478 - Game Theory and Economics**
From Professor Val Lambson:
(1) A Bayesian-Nash equilibrium is a list of strategies and a list of beliefs such that the strategies have the mutual best reply property given the beliefs, and the beliefs are derived by Bayes' rule given the strategies whenever Bayes' rule is well defined. Understand this and the rest is commentary.
(2) Ask questions.
David Spencer: 
The Man Behind the Desk
By Richard Evans, Kerk Phillips, and Abigail Weidmer

Spencer has achieved great things as a professor. He holds an impressive publication record and has published his research in several of the best journals, including Econometrica, American Economic Review, Review of Economics and Statistics, Journal of Econometrics, and the Journal of Monetary Credit, and Banking. He has also refereed for these journals and many others.

One of Spencer’s most cited papers is one he co-authored with Jo Anna Gray, a former colleague. The paper, titled “Price Prediction Errors and Real Activity: A Reassessment,” was published in 1989 in the Journal of Political Economy and has been cited in many subsequent studies. This paper, along with several others, established Spencer as a leading voice in the field of macroeconomics.

Spencer’s research has focused on a variety of topics, including macroeconomic stability, monetary policy, and the empirical implications of economic theories. He has co-authored several influential papers with Jo Anna Gray, a former colleague, on topics such as the relationship between interest rates and economic activity, and the impact of monetary policy on the business cycle.

Spencer has also been active in the field of econometrics, and has made significant contributions to the development of time-series econometric techniques. He is recognized as a leader in the field of applied econometrics, and his work has been widely cited in the academic community.

Spencer has been a mentor and teacher to many students, and has helped to shape the careers of numerous economists. He has taught at several universities, including the University of Oregon, the University of Washington, and the University of California, and has been a visiting professor at other institutions.

Spencer is also known for his dry sense of humor and his ability to keep a light touch. He is often seen wearing a black suit with a white shirt and a red tie, and he is frequently to be found in the economics department, working on his standing desk.

Spencer has been a valuable asset to the economics community, and his contributions to the field have been widely recognized. He has received numerous awards and honors, including the presidency of the American Economic Association, and has been a member of the editorial board of several leading journals.

Spencer’s work has been instrumental in advancing the field of macroeconomics, and his insights have been influential in shaping the way economists think about the economy. His legacy will continue to be felt for many years to come.

# Footnotes


Nearly 700 “budding young economists” (an affectionate term Professor Jim Kearl uses for his Econ 110 students) sit scattered throughout BYU’s largest auditorium when they learn one of the first and most significant principles of economics.

“Now,” says Kearl, loud and clear, “I’m going to auction off this one dollar bill.” He holds up a crisp dollar bill for the class to see. The students exchange curious glances, considering the same question: What’s the catch?

“There’s just one rule,” Kearl continues. “Both the highest and the second highest bidders must pay me when the auction is over. Got it?”

The bids start low. “Five cents!” yells one student.

“Ten cents!” shouts another.

“A quarter!”

Within sixty seconds one student reaches 95 cents. Another weighs the cost and shrugs his shoulders. “I’ll pay a dollar.”

But it’s not over yet. The student who bid 95 cents realizes that not only is she about to not get the dollar; she is also about to lose 95 cents.

“A dollar five!” she ventures.

“A dollar ten!”

The intrigued class members watch on as the bidding ping-pongs between these two students. It doesn’t stop until Kearl can pocket almost $10.

With this unforgettable lesson on opportunity cost and the surprising outcomes simple structures can have, Professor Kearl triggers a paradigm shift for many of his novice learners. Even though some students describe Economics 110 as difficult, daunting, and intimidating, they often use words like excellent, interesting, and phenomenal in the same sentences. One student review on ratemyprofessors.com notes, “This class WILL change your perception of the world.”
Economics? What?

"Most people don’t know what economics is," says Kaarl, who has taught the Principles of Economics course for 39 years. "Econ 110 teaches students how to use concepts that are novel to them to reason through interesting problems, and I think it’s very insightful. They begin to see things in a different way than they did before."

The truth is that most people sitting in Econ 110 would rather be anywhere else, not being quizzed on marginal cost, elasticity, and price ceilings. In fact, Professor Arden Pope, an Econ 110 professor of more than 20 years, says that he teaches students "ranging anywhere from indifferent to hostile" toward the class. Rather than choosing to take the class out of an interest in economics, they endure it to fulfill a general education requirement, a major or a minor requirement, or even a pre-requisite for their program, such as business management or finance. Some may wonder why a GE course needs to be so demanding, but Pope explains, "We respect students enough to give them a straight-up, rigorous, high-quality principles class. As such, Econ 110 will be challenging," he says, "especially for those who do not work hard to learn the principles taught in the first third of the term or semester." The other economics professors agree.

Kaarl says, "If students knuckle down and really learn the concepts and principles covered in the first third, they find that the last two thirds of the course opens new views on important contemporary policy issues. Then the class is a lot of fun." For these professors who live, think, and breathe economics, it is obvious why the class is a GE requirement. "Why wouldn’t it be?" Pope says. "Understanding economic activity is fundamental to understanding human activity."

The Opportunity Cost

Despite how significant the professors insist this class is, many students who want to maintain a high GPA hesitate to take it. Some of them have heard horror stories to the contrary. Despite the fact that the class is a GE requirement, many students who want to take it for a major or minor requirement are often reluctant to be in Econ 110 in the first place. "He notes that as students come to understand basic economic principles, it illuminates things that are important in their lives." Perhaps the best way to make class interesting is through using examples that are relevant to students. Although Kaarl and Pope admit that can be challenging as the age gap between professor and students widens, none of the teachers has to look far to show students that economics is all around them.

Associate Professor Brennan Platt, who has taught Principles of Economics for seven years, explains his strategy when the majority of students are more interested in getting into the business school than in studying economics. "My approach is to tell students, ‘These ideas are visible everywhere in your life. You will unavoidably be affected by the pressures of the market in whatever job you take or even if you are a stay-at-home parent,’" he says. "‘You will be seeing this forever, so let me help you understand the forces that are at work.’"

We teach these principles through models, which are like parables for how the market works. Platt continues. The students have to learn the mechanisms in...
these models so they can reproduce the thought process themselves. “Students are often lulled into thinking it is all common sense, but then they don’t notice when their logic breaks down. The models re-train their intuition, helping them think through a problem like an economist would,” he says. In class, the professors share examples from history, current events, missions, movies, and everyday life. The teaching assistants also find examples that work for them. One TA, Derek Johanson, says that using economic terms to describe BYU’s dating pool seems to resonate with students. “You talk about the cost of finding somebody who fits with a certain set of preferences,” he explains, “and you have to consider the cost of searching, the cost of uncovering information that requires significant investment, and then the reasons why sometimes it may appear to be more beneficial to stop looking because it’s just too expensive.”

**Turning the Light On**

As another TA, Liz Calder, explains, “Most economics majors don’t come to college planning to study economics but are ‘converted’ through Econ 110.” Calder was aware of economics before attending BYU since several of her older siblings were economics majors; still, she wasn’t convinced that economics was for her. In fact, she intentionally avoided the class at first because she wanted to be unique in her family. After taking introductory courses to several other majors, Liz decided to try Econ 105. Only a few weeks into the course, she decided she liked it. That decision, combined with the time Professor James McDonald stopped her outside the FOB and told her, “You look like you should be an econ major,” persuaded Liz to study economics after all. Platt, who originally planned on medical school because he grew up being told that smart people become doctors, offers a similar insight. “Few people have much exposure to economics before taking an intro class in college. Students are often surprised (as I was) to find this whole profession that can harness their math talents toward studying how we make choices, and it pays well too,” he says. “Economics gives you this unique analytical toolkit that is very valuable.”

Platt says it is precisely the fact that few students have been exposed to economics that makes Econ 110 a rewarding class to teach. It gives him the opportunity to open students’ minds to new ideas. “The ones that catch on really light up and get excited,” he says. “It’s a new perspective for them and it’s fun to be a part of that.”

**TOTAL ENROLLMENT PER CALENDAR YEAR**

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1. Experiments

At its best, economics strives to inquire into the nature of the economy and society using the scientific method. The scientific method involves a continual iteration between objectively observing the real world and formulating testable hypotheses that might explain these observations. In hard sciences like physics or chemistry, this means conducting controlled experiments that are replicable by other experimenters. This is not always possible in the social sciences. For example, if I were to approach the US Federal Reserve and propose an experiment that required doubling the money supply overnight in an attempt to observe the effects on the prices of goods and services, they would likely treat me as a crackpot. And even if I were somehow able to convince them to do so, it would not be possible to replicate the experiment at a later date, holding the environment constant, since economic conditions unrelated to the money supply would undoubtedly change in the meantime.

To analyze the economy, economists must rely on natural experiments where some key variable changes. This requires heavy use of statistical techniques. Let’s say that I choose to look at periods of rapid money growth over time and across various countries. In so doing, other variables that also influence the price of goods and services will fluctuate. As an objective researcher, I need to ascertain whether or not the price movement I observe can reasonably be caused by rapid increases in the supply of money, rather than by some other factor. I would be testing a hypothesis using statistical tools and techniques rather than by holding all other potential causes constant, as I would in a controlled experiment. For this reason, the economics profession puts a great deal of time and effort into training economists in the best available statistical techniques.

One drawback to natural experiments is that there is always some underlying randomness that is difficult to purge. When a test is performed, it is with some level of confidence, typically 85% or 95% percent. We reject a hypothesis if the chances of getting a result randomly are 95 percent, for example. Note, however, that this means that on average we will reject a true hypothesis five percent of the time.

In practical terms, this means that determining the truth of a hypothesis requires testing with more than one dataset and often with more than one method of analysis. In terms of hypothesis testing, economics strives to be scientific. But how are the hypotheses formed in the first place?

2. Theory

Hypotheses are derived from underlying theory. In order to generate meaningful hypotheses, theory must be carefully constructed. Testable hypotheses do not always emerge easily from theory. The commonly accepted way of constructing a theory and hypothesis is as follows:

1. State a set of assumptions. These assumptions must be realistic to work in the real world. Reasonable people can and will disagree about the validity of the assumptions, and that is okay.

2. Use tools of logic, including mathematics, to derive a testable hypothesis. For example, when formulating a hypothesis, one could translate the assumptions into mathematics and then use mathematical tools to derive a hypothesis. Unlike the statement of assumptions, there should be no disguise about this step.

Here is a quick and simple example.

Assumption 1. A hot dog consists of a sausage and a bun. Let \( B \) be the price of a bun. Let \( S \) be the price of a sausage.

Assumption 2. Sausages cost 50 cents each and buns cost 25 cents each.

Now let’s translate this into math. Let \( S = 50 \) and \( B = 25 \). These come from Assumption 2. Let \( C \) be the cost of ingredients for a hot dog. By Assumption 1, we get \( C = S + B \). Applying the mathematical tools, \( C = 50 + 25 = 75 \). Our testable hypothesis is that the ingredients used to produce one hot dog will cost 75 cents.

Notice that we could disagree about the assumptions. Maybe a proper hot dog is more than just a sausage and a bun. Maybe sausages cost more than 50 cents each. However, once we accept the assumptions, it follows inescapably that the cost of ingredients is 75 cents.

This is a trivial example, but it illustrates what economic theory (and theory in most scientific disciplines) actually does. In many cases, the hypothesis must be formally proved. Often we needed to rely on results from various fields of mathematics in order to show that a hypothesis follows naturally from the assumptions.

Among the widely-used assumptions in economics are the following:

1. Firms act to maximize their profits. This is the basis for standard economic theory of the firm.
2. Households act to maximize utility or well-being. This is the basis for consumer theory.

In both cases, the theorist needs to carefully define what is meant by profit and utility.

By using the scientific method, economic scientists have gradually developed a widely-accepted set of core theories that describe the general functioning of the real economy.

3. Computation

Although much of economic theory can be done using a pencil and paper, some models are complex and deriving results that can be tested against data is difficult. In these cases, numerically simulating a model can be informative. This is the realm of computational economics, a relatively new field that has expanded rapidly along with the rise in computational capability.

Most of the time economists rely on natural experiments and use statistical analysis to identify the effects of particular causes in the face of many other changing factors. Another way to proceed is to build realistic models and then simulate them.

Robert E. Lucas of the University of Chicago, the 1995 Nobel Prize winner in economics, said, “One of the functions of theoretical economics is to provide fully articulated, artificial economic systems that can serve as laboratories in which policies that would be prohibitively expensive to experiment with in actual economies can be tested at a much lower cost.”

One attempt at such a model was undertaken by William Phillips (no known relation) of the London School of Economics in 1948. The Phillips Hydrualic Computer was an analogue computer that used fluid mechanics to mimic the flow of goods and services in the economy.

Today, digital computing is a much more powerful and widely available resource used to implement economic models. This approach is already common in many other disciplines, such as engineering and meteorology.

Although setting up and solving simple systems on a computer is not difficult, dynamic modeling of systems with many interacting variables can be quite complex and requires a unique set of tools.

One example of this from physics is called the N-body problem. The interacting effects of gravity on two celestial bodies can easily be solved using the mathematical tools from differential equations.

Two bodies in a stable dynamic system will follow elliptical orbits in relation to each other. However, when the number of bodies increases to three or higher, the mathematical solutions cannot be found. The paths of the bodies over time can be simulated, but not solved exactly. This was one of the early uses of supercomputers.

In economics, the solution to dynamic models of consumer and producer behavior is similarly complicated. Economic behavior over time can be written down as the solutions to dynamic optimization problems. These solutions which we call equilibria, are often intractable, at least for interesting and realistic models.

As a result, the solutions must be approximated and, of course, the more accurate the approximation, the better. The tools to build and simulate these models are only now beginning to be applied in the field of economics. The foundations for these tools include much applied mathematics and computer science that has not traditionally been taught to economics students.

Because computing power seems likely to grow at high rates for the foreseeable future, a student interested in pursuing a career in economics may want to develop skills in numerical analysis and computer programming.

With a good set of tools and a willingness to use them properly, economics can be approached using the scientific method. One must also have an open mind. Perhaps the worst mistake is to assume one knows the correct answer to a question from the outset.
Economists have long tried to understand the reasons why some individuals and countries prefer higher income redistribution rates than others. A 2001 study found a strong positive correlation between country-level beliefs about the relative importance of luck versus effort in determining income and the level of public social-welfare spending. Countries where citizens state a firmer belief that income variation is primarily the result of luck have much higher levels of taxation and income redistribution.

Unfortunately, virtually all of these systems have been economic disasters. First, they are extremely costly to build and operate, and second, they provide few benefits to the taxpayers that must support them. Take Salt Lake’s commuter rail line, for example. The first segment, connecting Salt Lake City and Ogden, was finished in 2008 at a cost of about $600 million—$30 million per year if we assume that the opportunity cost of capital is 5 percent. Operating costs for 2011 were about $20 million. That means the annual cost for that part of the transit system is about $50 million per year. With a total of 16.6 million trips on the commuter rail in 2011, the average total cost of a trip was about $1.31 or $62 for a round trip commute. The average fare collected per trip, however, was only $1.54, resulting in a subsidy of more than $60 per round trip. Based on the average 22 work days per month, taxpayers pay a subsidy of more than $1,300 per commuter each month.

Yet rail systems work well in some parts of the world. Many of the rail networks in Japan, for example, are privately owned and operate at a profit. When a lot of jobs are located in a small area and a lot of workers are concentrated in another small area, it makes sense to operate a rail system. In this situation, average costs fall quickly with the number of riders. It is like an airline operating a jumbo jet. It makes sense when there are 500 people who want to get from point A to point B at about the same time to put them all in the same airplane.

A commuter train from Provo to Salt Lake however, is similar to operating frequent jumbo jet service between Pocatello, Idaho and Billings, Montana.

A common assertion by rail proponents is that rail service will support them. Take Salt Lake’s commuter rail line, for example. The students miss school for a variety of reasons, including illness, injury, trauma, suspension, and expulsion. Students who are repeatedly absent from school tend to struggle in multiple areas of their lives. For instance, research has shown that chronic absence in kindergarten predicts low levels of educational achievement in the fifth grade, with the most pronounced effects among poor children. Among older children, those who are frequently absent are more likely than their regularly attending peers to perform poorly in academics, to drop out of school, to use alcohol and drugs, and to be involved in the juvenile justice system.

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SOCIALISM: Principles

During the Cold War, socialism was broadly studied and debated, but public interest quickly faded after the fall of the Soviet Union. While there are many variations on the socialist theme, they all share two foundational principles:

Equality as an objective—The central tenet of socialism is that human needs (rather than wealth or ability) should dictate who gets what. Since our basic needs are essentially the same, socialists conclude we should have a fairly equal distribution of goods, adjusted for family size, illness, and other needs.

Collective control of resources—The companion principle is that each individual should contribute to society according to his ability. Yet if abilities differ, then so will output, and that output may not correlate with needs. To achieve equal consumption despite unequal production, a socialist advocates for the collective ownership of all property. That is, the society as a whole decides where and how to use resources, and what to do with the output. Here, property is not just land and bank accounts, but also factories, inventions, and even labor.

SOCIALISM: Practices

Large-scale experiments with socialism began in the last century, organized in the political form of communism: a powerful, virtually unchecked national government which directly manages economic decisions to achieve socialist aims. Communists believe that strong governments are only an intermediate step, necessary to wrestle away power from capitalists. Once people are freed from their selfish tendencies, they will naturally behave as good socialists without coercive government influence. This began with the 1917 Bolshevik revolution in Russia, but they were joined by all the Eastern European nations (some against their will following World War II, as well as China, North Korea, and Vietnam). Communist governments began to crumble during the 1980s as they collided with two forces. The first was the human desire for freedom, which constantly chafed at the coercion and punishment required to enforce communist planning. The second was economic inefficiency, as state planning mismanaged most aspects of production and distribution, and planning boards lacked the information needed to detect the waste and respond to inefficiency. Eventually, it became impossible to provide even the basic needs of citizens. Today, only North Korea practices Soviet-style communism. Others, like China and Cuba, are still politically communist but are opening large sectors of their economies to free markets. More often, socialist ideals are mingled with market institutions, such as the nationalization of select industries in Venezuela or redistributive programs in the US and Europe.

Economic inequality is an inevitable byproduct of free markets, since some resources will command higher prices than others. Concerned with this disparity, many people have sought alternatives that provide for all men equally, a philosophy known as socialism. In modern times, that term has taken a more specific meaning, inexorably linked with the ideas of Karl Marx and their implementation.

Latter-day Saint theology also outlines doctrine and practices for reducing inequality. Early in the restoration, the Saints attempted an ambitious program called the United Order. Because socialism and the United Order proclaim similar objectives and employ some common methods, members of the Church of Jesus Christ of Latter-day Saints often confuse the two. However, there are substantial differences between them, which place them fundamentally at odds with each other. A careful review of these distinctions provides economic insights on the incentive problems in socialism, as well as spiritual insight on eternal principles that we strive to live today.
The Lord also approves of inequality, yet He intends to solve the problem in His own way.6 He revealed to Joseph Smith an economic system known as the United Order. At its foundation are three principles: consecration, stewardship, and individual decision-making. A bishop may only require that a member commit all of his or her property to the Lord and that he or she be given full control over it, yet it is not ours or His.5

Consecration — The literal definition of consecrate is “to declare sacred.” Consecration is the act of setting something apart so that it can be used for religious purposes.7 Consecration is a sacrifice of everything. However, the Lord may not have immediate need of a particular talent or resource for now, in which case it remains with the consecrated individual. Thus, consecration is not really an act, but an attitude that says, “All that I have is thine. Just say the word, and I will use it according to thy command.” In other words, consecration is a pre-commitment to total sacrifice.

Stewardship — The Lord created all things, so ultimately all property and resources belong to Him.7 Thus, when we consecrate our property, we are merely acknowledging His ownership of our resources. This places us in the role of a steward. We are entrusted with the Lord’s property and given full control over it, yet it is not ours or His.7

This sheds significant light on our choices and individual decision-making. A bishop may only require that a member commit all of his or her property to the Lord and that he or she be given full control over it, yet it is not ours or His.5

CONTRASTING PRINCIPLES

It is my intent to provide a far clearer contrast between these two systems, rather than shooting down a straw-man version of socialism. My hope is that the preceding contrast of the ideologies and the ideals, and the intent and the outcomes in doing so, I see four major areas which set the two systems fundamentally at odds with socialism.

God wants the rich to choose to humble themselves, not have it forced upon them. A dictator will order them back in line, to keep 20 million free men following behind.41 The same cannot be said of the state, which demands from people what it wants, not what they want.41 The same cannot be said of the state, which demands from people what it wants, not what they want.41

God loves the rich to choose to humble themselves, not have it forced upon them. A dictator will order them back in line, to keep 20 million free men following behind.41 The same cannot be said of the state, which demands from people what it wants, not what they want.41
socialism, because my consumption is determined independently from his. I have no direct claim on any surplus. Even so, the United Order does not compete as strongly as capitalism does; only true charity can fill that gap. Compared to socialism, though, the incentives are definitely stronger; risk-taking and experimentation carries reward rather than punishment, and members see direct benefit from their increased productivity. Moreover, if men fall into a selfish rut, they still have incentive to be productive, or misallocate their resources. The Order (though they will retain their surplus), while selfish, societies become totally idle. In this sense, the United Order is much better suited for the “real world.”

Authority

The United Order is administered through priesthood authority, with bishops playing a pivotal role in the initial assignment of priesthood authority, with bishops playing a pivotal role in the initial assignment of priesthood authority. Bishops are responsible for the “real world.” Moreover, if men fall into a selfish rut, they still have incentive to be productive, or misallocate their resources. The Order (though they will retain their surplus), while selfish, societies become totally idle. In this sense, the United Order is much better suited for the “real world.”

Motivation and Preparation

The final point of comparison is in the underlying motivation of individuals. At first glance, it seems that either system asks men to act out of a love for their fellow man, but that is not the whole story. In the United Order, love of man is not the primary motive; love of God comes first. The distinction is important, especially in those moments when my neighbor is hard to love. Even when I suspect that someone is abusing the system, I can still contribute to the system out of love of a God. In socialism, love of man is meant to be the eventual motivation (since men have become re-educated). In the meantime, fear of the state is the primary motivation used. Another troubling aspect of socialist motivation is the rhetoric of class warfare. They saw belief in God and an afterlife as a sedative or “opiate,” keeping the masses complacent and thus delaying the revolution. To get the ball rolling, men needed to stop depending on God and take matters into their own hands.

In the Church, a bishop, even with his failings and mistakes, can form his priesthood mantle, for he is too fallible; there is no guarantee of special business savvy. Yet the United Order has three advantages over socialists in addressing informational problems. First, it retains a free market and its price system. These prices provide important information about the relative value of various resources, and can guide the bishops in their use as it does under capitalism.

Second, the Order allows for the trade of private property. Thus, if a resource was misallocated to someone, that person would magnify his stewardship by selling the inheritance to someone better qualified, and purchasing other resources that he can more effectively use. Thus, misallocations are not permanent.

Finally, on the difficult task of determining needs for those seeking help from the Lord, the Church has a mechanism: storehouse, it is comforting to know that bishops have the Holy Ghost to inspire them. In many calls, I have witnessed a bishop receive clear prompts in a difficult case, and later seen that decision validated by new information. Errors still occur, of course, but I have confidence that they are minor.

Conclusions

The Lord’s unique program is equitably capitalistic. It aims to serve the purpose to provide for my saints, for all things are mine. For the earth is full, and is enough and there is no need and I prepared all things to spare; yea, I prepared all things, and have given unto the children of men to be agents unto themselves. The United Order is not a socialist program. The underlying philosophies differ greatly, and these distinctions bear serious doctrinal weight. I testify to the evident superiority of the Lord’s own way, and look forward to the millennial reign when I might live under it.
MANY ECONOMICS students are taking advantage of mentored research, one of several valuable opportunities available to BYU undergraduate students. This year, senior Michael Webb took first place for his research with Assistant Professor Brigham Frandsen. His poster was titled “Public Employee Pensions and Collective Bargaining Rights: Evidence from State and Local Government Finances.”

Together, Webb and Frandsen researched whether collective bargaining rights increase the generosity of public employee pensions. If collective bargaining causes pensions to increase, it could put a strain on state budgets and reduce resources for other needs, like education.

To learn more, Webb and Frandsen delved into collective bargaining laws created across all 50 states between 1962 and 1986 to determine their effects on retirement pensions for public employees (e.g., teachers, police, and firefighters). Using these resources, they examined two questions: (1) Did the size of retirement pensions change with increased collective bargaining? and (2) Did the fraction of the pension that employees are required to contribute change?

Webb and Frandsen found that among states that mandate collective bargaining, the fraction of the pension contributed by the employee decreases as bargaining rights increase. This is statistically significant.

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As one of 389 participants in the poster conference, held in the Wilkinson Center Ballroom, Webb presented his research to the public and answered questions posed by the conference judges. Inspired by his econometrics class (also with Frandsen) to assist in this research project, Webb says, “I wish I had known about this in previous years and that I had taken econometrics earlier so I would have had more time as a student to do things like this.”

Webb graduated in April, and interned this summer with a market research firm called The Modellers. He plans to pursue an opportunity in statistical analysis and earn an MBA a few years down the road.

Three years ago, Kaitlyn Lewis entered BYU as a junior with a declared major in economics. Now she embarks on the road to professorship as she begins her PhD studies at UC San Diego, where she is excited to represent the Economics Department. “I hope I can show that the department does a wonderful job of preparing students for graduate school and instills in us a love of the economics discipline,” she says.

Having tested out of Econ 110 as an AP student, Lewis’ first college-level economics courses were upper division. She remembers feeling scared before entering Econ 380, Intermediate Micro Theory I (micro), her first semester, but says it was by far her favorite class of the semester. “It showed me how economics can be applied to things other than just the economy as a whole,” Lewis recalls. “It’s about individual decisions too.”

Despite her passion for economics, Lewis was unsure how she would apply her knowledge in the real world. It was when she began researching with Visiting Assistant Professor Ogja Stoddard that she realized the value of research and decided to go for a PhD.

When it came time to take the GRE, Lewis was confident she would perform well on the math portion of the exam (much is her minor), but was less sure about the verbal section. Little did she know that her verbal score would match her math score—perfect. “The verbal killed me,” she expresses. “Well, I thought it was killing me. I was surprised when I saw my score. I thought, ‘I must be a really good guesser because I was struggling’.

With a 4.0 GPA and a perfect score on the GRE, Lewis had her pick of PhD programs. Ultimately, she chose UC San Diego because of the school’s specialties in microeconomics and its close proximity to family. Mostly, Lewis is interested in behavioral economics but is open to other topics.

Lewis was honored to represent the April 2014 graduating economics class as valedictorian. She also looks forward to becoming a well-rounded economist in graduate school. “Overall, I’m just really excited to learn a lot,” Lewis says. “I know it’s going to be a lot of hard work, but my biggest hope for grad school is that I can rise to the challenge and make the most of every opportunity I am given.”
By the numbers

72 plan to attend graduate school

72 have been accepted to graduate school

45 have accepted job offers

61 plan to work full time

50 completed internships before graduating

Graduate Programs
(Those who are already accepted)

- Boston College
- Brigham Young University
- Carnegie Mellon University
- Columbia University
- George Washington University
- Johns Hopkins University
- Massachusetts Institute of Technology
- Ohio State
- Stanford University
- University of California, Berkeley
- University of California, San Diego
- University of California, Santa Barbara
- University of Chicago
- University of Minnesota
- University of Rochester
- University of Texas at Austin
- University of Texas, Southwestern
- University of Virginia
- University of Pennsylvania

Planned Graduate Programs
(Those who plan to attend)

- Brigham Young University
- Columbia University
- George Washington University
- Johns Hopkins University
- Massachusetts Institute of Technology

Plan to attend graduate school

34% - Utah
18% - West (not including Utah)
30% - South
11% - Northeast
13% - Medicine
11% - Law
13% - Undecided
20% - Other
41% - Business
3% - Medicine
44% - Econ PhD

Job Industry
(Those who have accepted job offers)

- Charles River Associates
- CMI
- Control4
- Domino's Pizza
- Discover Financial Services
- Epic
- General Dynamics
- Goldman Sachs
- JPMorgan Chase
- McKesson & Company
- MedAssets
- Merck
- Nasa Technology
- Nomura
- Northwestern Mutual
- Proofpoint
- Select Portfolio
- Select Staffing
- Stoneway Capital
- Team For America
- United States Army
- United States Senate Finance Committee
- Vanguard
- US

Graduate Student Conference

By Joseph Price and Jeff Swigert

On June 19-20, the Economics Department hosted the BYU Graduate Student Conference, the first of its kind, and welcomed back 21 alumni currently pursuing PhDs in economics at graduate schools across the country. The program provided students opportunities to present and receive early feedback on current research as well as a chance to air newer research ideas during a “lightning round” session. An impressive aspect of the conference was the collegiality and generosity shown by all in attendance.

One of the primary goals of the conference was to strengthen the network among alumni and help this network develop into an ongoing source of support and collaboration. Throughout the conference, students were offered timely advice on how to navigate this critical stage in their development as scholars. This included counsel to let faith inform their efforts to excel in economics as well as how to choose the criteria by which to measure success. Students left with improved ideas, new collaborations, and a renewed sense of what it means to be BYU trained economists.
Alumni Spotlights

1. Barry Engle - 1987
Agility Fuel Systems

BARRY ENGLE spent the early part of his career working for Ford Motor Company, including five international assignments. Over 18 years, he lived in Mexico, Japan, Brazil (twice), and for a time commuted weekly from Detroit to Toronto as the president and CEO of Ford of Canada. Engle’s extensive international experience with Ford positioned him to later run two global corporations, one based in Italy and the other in Norway.

In 2001, Engle ventured with his family to Sao Paulo, Brazil, where he tackled the responsibility of making Ford profitable in South America. For the 10 years prior to his arrival, Ford had lost money, including $500 million in the most recent year alone. In fact, Engle says it was so bad that the board of directors in the US would not give his team any more money. “Essentially they told us, ‘If you can save the company great, if not, turn off the lights and come home.’” Engle explains.

When Engle left Sao Paulo three years later, Ford was making money once again. By restructuring and rebuilding the entire company, Engle’s team had doubled Ford’s market share. In 2001, after a second tour of duty in Brazil, Ford made over $500 million and $1 billion the year following Engle’s return to the States. “It was incredibly hard work, yet absolutely exhilarating,” Engle says. Ford’s turnaround in South America became a template for its subsequent turnaround in North America, which Engle also participated in as the head of marketing.

“I really enjoy tough business situations and conditions that seem impossible to fix,” Engle expresses. “There’s nothing more rewarding than leading a team in attacking a problem and together accomplishing something most people, even the team itself, thought couldn’t be done.”

In his current position as CEO of Agility Fuel Systems, Engle fills a similar role. Although the company wasn’t suffering before, it has recently achieved explosive growth. In the last five years of its 20-year existence, Agility’s sales have increased fivefold.

Considering his career so far, Engle says, “Hopefully I’ve left a legacy of integrity, transparency, and fairness. Those are values I try to emulate in my own actions and I hope it has inspired the people and teams that I work with to perform in a similar way.”

2. David Bywater - 1993
Vivint

DAVID BYWATER rates efficiencies—and all companies have them, he says. This trait makes Bywater an economist at heart; it also makes him an effective businessman. The passion he feels for what he does makes him an inspirational leader.

Bywater, who fell in love with business before he could even begin a PhD in economics, takes great pride in helping companies achieve their best performance. He explains that the key to achieving full potential within any entity—whether a business, a nonprofit organization, or a family unit—is to gain a sustainable advantage with the right economic model. That’s where efficiencies come into play. “They always say that unnatural things die in the wild,” Bywater states. “Inefficient organizations always die at some point, so the fun of business is to make it naturally self-sufficient, and if you can do that, it will thrive.”

After spending 20 years helping companies around the world reach their full potential—first as a consultant with Bain & Company and then as a Chief Operating Officer at Xerox—Bywater joined Vivint as their Chief Operating Officer.

The friendship between Bywater and Vivint CEO Todd Pedersen began 14 years ago, the summer after Bywater graduated from Harvard Business School with his MBA. Bywater postponed joining Bain & Company to spend the summer trying to start a new business arm at APX. Bywater stayed in touch with Pedersen and tracked the progress of APX over the next decade.

In 2013, Pedersen approached Bywater about returning to APX, then rebranded as Vivint and recently purchased by Blackstone Capital for $2.2 billion. They needed a professional COO. At that point, Bywater held a high position at Xerox and had no intention of leaving, but after seeing Vivint’s potential to disrupt the home automation industry and feeling the energy of its employees, he made the leap. In July 2013, Bywater became COO of Vivint.

In his current position, Bywater oversees Vivint’s daily operations, including customer operations, human resources, field service, data analytics, and supply chain and he loves it. Speaking about his personal passion, Bywater remarks, “Everyone finds what turns their engine—some people want to be investment bankers, some consultants, and some engineers. For me, it’s growing companies (and people) in the most efficient and expeditious manner possible.”

3. Tally Payne - 1997
Casper College

FORTALLY PAYNE, a wife, mother of four, and adjunct professor of American Government at Casper College in Wyoming, juggling priorities has become an integral part of life—at least, what other people call priorities. Payne analyzes her responsibilities in terms of opportunity cost.

Payne graduated at the top of her class and began her career as an economist for Ernst & Young’s economic consulting group in Washington, DC. There she worked primarily on international transfer pricing, a field that she found fascinating. But Payne counted the cost of that career: “Even though I absolutely loved my job, it just wouldn’t work with a family,” Payne says.

Payne says her family has always come first. “It has never been a 50/50 or any type of trying to work it out at all,” she states. “My family came first, and I just happen to be a person who could do a little bit more.”

After having her first child in DC, Payne continued to work for Ernst & Young part-time from home. She worked remotely for a time after returning to BYU for a master’s degree in American Studies. Shortly after beginning graduate school, however, she began to feel overwhelmed by an intense one-year degree, a husband, a one-year old baby, and a part-time job, and she resigned from Ernst & Young.

As a graduate student, Payne worked closely with former economics professor Payne Pope. Her master’s thesis evolved from undergraduate research she conducted with Pope on the education statistics of pioneer children, and Pepe served as the chair of Payne’s thesis committee. Together, they worked on several other projects.

Now, as a distance education professor, Payne’s work gets squeezed into little pockets of time early in the morning, late at night, or between activities with her children. Sometimes it means getting up at 4:30 a.m. to work before waking her children at 6:00 a.m. and never going back to bed. “It takes flexibility, time management, and a lot of self-discipline,” Payne says.

When asked if she would ever return to full-time economics, Payne comments, “I feel like I never left because it’s so ingrained in me. I still think like an economist. I run my house like an economist. It’s in my calling, the way I serve. It impacts everything I do.”
4. Drew Johnson - 1993
Gauge Capital

BACK WHEN McKinsey & Company began recruiting from the Economics Department, Drew Johnson had never heard of consulting as a career. Rather, he spent his time interviewing with investment banks and applying to law school while he prepared to graduate from BYU. So he was surprised when Mackay called him one day to discuss job opportunities. In response to Mackay’s request for BYU’s best economics students, the chair of the Economics Department had offered Johnson’s name.

Once Johnson learned more about McKinsey and what they did, he became intrigued. When he discovered that many of the employees came from prestigious schools such as Stanford and Harvard, he decided McKinsey was where he wanted to be. Johnson worked for McKinsey in Los Angeles and Seoul Korea for two years before attending Harvard Business School in 1995.

After receiving his MBA from Harvard, Johnson worked in Dallas at Cardinal Investment Capital, which managed capital in both the public and private equity markets. Johnson notes, “When I left business school, PE still meant physical education, not private equity.” But at CIC, “PE” quickly shifted meaning for Johnson as he focused on private equity investments primarily in the food and healthcare industries.

Johnson spent 16 years with CIC, until the attraction of creating his own firm ultimately pulled him away. In 2012, Johnson co-founded Gauge Capital in Dallas, where he is now the CEO. As CEO, Johnson leads the firm in the following main areas:

1. Making good investment decisions
2. Building successful management teams
3. Implementing the right strategy for investments
4. Assuring that good teams and strategies have the capital they deserve

Throughout his career, Johnson has found satisfaction in helping people and organizations fulfill their potential. “I feel like I have the best job in the world,” he says.

Johnson also serves on the National Advisory Council for BYU’s Marriott School of Management.

5. Amber Mackay - 2005
Achievement First

WHILE STUDYING for a master’s degree in finance and economics at the London School of Economics, Amber Mackay had an “aha!” moment. Although she had anticipated working in the finance field, she discovered a “fascinating interplay” between analytical skills and directly making a difference. This interplay came as she learned about foundations that were strategically investing in nonprofits similar to the way hedge funds invest in companies.

After much searching, Mackay stumbled upon Achievement First, a network of K-12 charter schools in Connecticut, New York, and Rhode Island. The purpose of the schools is to bring college preparation to low-income neighborhoods through quality education. Those students who benefit are individuals who would likely be stuck in a cycle of poverty without the opportunity to attend college.

According to Mackay, there are many brilliant educators who work at Achievement First; however, she brings a different but equally necessary skill set to the organization. She runs a data team that she describes as “an intersection of applied analytics and education reform.” This team serves two main purposes:

1. To find ways to measure the success of both teachers and students
2. To help the organization access all of the available data and make strategic decisions

The trick is doing these two things as quickly and effectively as possible. Mackay explains, “One of the biggest challenges is trying to do robust analytical work, but be urgent and intuitive as possible because data is most relevant the moment it’s accessible.”

With access to this information, teachers and school leaders can make decisions to help keep students on track to receive a college education, rather than waiting until the end of the year and wishing they had done something different.

Mackay’s data team uses multiple measures to gauge teacher impact and student outcomes, including statistical value-added models. In partnership with other divisions in the organization, they have created a merit-based career progression for teachers.

Mackay, who solidified her economics skills as an analyst at Aon Consulting before attending graduate school, says, “It’s great to have an expertise that I can apply and feel like I’m actively contributing to something really good.”
decorating the dinner table with candy and insisting that the students with a moving ladder. How many of the books in there has he toured Kearl’s beautiful home, including an extensive library equipped has ever met (he is a Colin Powell fan). Following dinner, students At Kearl’s home, a large group of students enjoyed dinner and could not be beaten. Zeppelin guitar-playing and his daughter’s one-handed cartwheels four children. After dinner, everyone shared a unique skill or interest, students visited Lars Lefgren’s home, where they met his wife and wife designed the house themselves, in part to accommodate his large collections, including historical currency from all over the world and old maps from the Middle East, making it rather legendary of past economics students dining with A AFTER HEARING RUMORS By Eleanor Golightly...
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