

Applied Microeconomics: Consumption, Production and Markets

David L. Debertin

This is a microeconomic theory book designed for upper-division undergraduate students in economics and agricultural economics. A free pdf download of the entire book at download at

<http://purl.umn.edu/158321>

Amazon markets bound print copies of the book at amazon.com at a nominal price (about \$25) for classroom use.

http://www.amazon.com/Applied-Microeconomics-Consumption-Production-Markets/dp/1475244347/ref=sr_1_5?ie=UTF8&qid=1390834118&sr=8-5&keywords=debertin

The book can also be ordered through college bookstores using the following ISBN numbers:

ISBN-13: 978-1475244342

ISBN-10: 1475244347

Basic introductory college courses in microeconomics and differential calculus are the assumed prerequisites. The last, tenth, chapter of the book reviews some mathematical principles basic to the other chapters. All of the chapters contain many numerical examples and graphs developed from the numerical examples. The ambitious student could recreate any of the charts and tables contained in the book using a computer and Excel spreadsheets. There are many numerical examples of the key elements of marginal analysis. In addition, many practical examples are taken from the real world to illustrate key points.

Most of the examples used in the book come from the food and agricultural industries, broadly defined. Examples in consumer choice and utility focus on

consumer decisions to purchase hamburgers and French fries. Production examples involve choices farmers make in order to apply fertilizer to crops. Market models are employed that illustrate consumer choice between beef, pork and chicken at the grocery meat counter, and so on. A few of the examples do not employ agriculturally related goods, such as the examples dealing with the fate of the Polaroid corporation and its instant cameras, monopoly power of cable television providers and competition between the big three auto makers in the 1950s.

Each chapter begins with material that will be familiar to nearly any student who has passed an introductory microeconomics course. However, as each chapter progresses, the problems and the math required to complete them get tougher. Critical points throughout the text are highlighted in text boxes. The instructor need not use all of the sections of each chapter for a course as each section of each chapter is self-contained.

Each chapter concludes with a basic summary of key points and a comprehensive list of terms and definitions. Students might choose to begin by reading the key summary points and definitions at the end of each chapter. Each chapter also contains a spreadsheet exercise for students to create examples similar to the tables and charts in the text.

The book is designed for use in a one-semester course, covering the parts of microeconomics that nearly every instructor believes should be covered at the intermediate level, but also recognizing that most instructors will want to devote a few weeks of the semester to material specific to their own interests.

You could print the book directly from the free e-download, but Amazon does such a nice job of binding and printing the book in an easy-to-put-in-a-backpack format, if I were an instructor I would simply order the bound copies. I have experimented with simply downloading this as a pdf e-book. The problem that I get into is that would like to be able to flip pages around to compare graphs directly with table numbers, and also look at math steps that occurred a few pages ago, and I really believe that the print copy is still extremely important here in the learning process.

Everything in the book is tied back to what was contained in chapters 3-9 of the introductory slides, but everything also becomes more quantitative with the combination of calculus and spreadsheets applied. The transition should be very smooth from introductory to intermediate level.

Links for Free Downloads of Spreadsheets and Computer Exercises

Chapter 1 Introduction

(None)

Chapter 2 Demand and Supply

Constructing linear demand and supply functions

<http://www.uky.edu/~deberti/am/chapter2linear.xlsx>

Constructing nonlinear demand and supply functions

<http://www.uky.edu/~deberti/am/chapter2nonlinear.xlsx>

Exercise: Linear demand function with a shifter

<http://www.uky.edu/~deberti/am/exerchap2a.xlsx>

Chapter 3 Elasticities

Elasticities, linear and nonlinear functions

<http://www.uky.edu/~deberti/am/chapter3elasticities.xlsx>

Exercise: calculating elasticities

<http://www.uky.edu/~deberti/am/exerchapter3.xlsx>

Chapter 4 Consumer Choice

Constructing budget lines

<http://www.uky.edu/~deberti/am/chapter4budget.xlsx>

Constructing indifference curves

<http://www.uky.edu/~deberti/am/chapter4indifference.xlsx>

Lagrangean optimization

<http://www.uky.edu/~deberti/am/chapter4lagrange.xlsx>

Exercise: basic utility functions

<http://www.uky.edu/~deberti/am/exerchapter4a.xlsx>

Exercise: 3D indifference curves

<http://www.uky.edu/~deberti/am/exerchapter4b.xlsx>

Chapter 5 Production with One Variable Input

Basic Production, MPP and APP curves

<http://www.uky.edu/~deberti/am/chapter5prod1.xlsx>

Revenue, cost and profit

<http://www.uky.edu/~deberti/am/chapter5prod3.xls>

Exercise: basic revenue, cost and profit

<http://www.uky.edu/~deberti/am/exerchapter5a.xlsx>

Exercise: graphics for basic revenue, cost and profit

<http://www.uky.edu/~deberti/am/exerchapter5b.xlsx>

Chapter 6 Costs of Production from the Output Side

Cost functions from polynomial production functions

<http://www.uky.edu/~deberti/am/chapter6cost.xlsx>

Exercise: polynomial cost functions

<http://www.uky.edu/~deberti/am/exerchapter6.xlsx>

Exercise: More cost from production

<http://www.uky.edu/~deberti/am/exerchapter6b.xlsx>

Chapter 7 Production with two Variable Inputs

Drawing 3D Production surfaces

<http://www.uky.edu/~deberti/am/chapter7twoinput.xlsx>

Budget lines

<http://www.uky.edu/~deberti/am/chapter7twoinput3.xlsx>

Chapter 8 Production with Two Outputs

A product transformation curve from two production functions

<http://www.uky.edu/~deberti/am/chapter8twooutput.xlsx>

A two-output 3D production surface

<http://www.uky.edu/~deberti/am/chapter8twooutput2.xlsx>

Exercise: Building product transformation curves

<http://www.uky.edu/~deberti/am/exerchapter8.xlsx>

Chapter 9 Market Models of Competition

Pure competition

<http://www.uky.edu/~deberti/am/chapter9comp.xlsx>

Monopoly

<http://www.uky.edu/~deberti/am/chapter9monop.xlsx>

Monopolistic competition

<http://www.uky.edu/~deberti/am/chapter9monopcomp.xlsx>

Other Books:

Economics of Food and Agriculture (Third edition, 2014)

David L. Debertain

This is a heavily-edited version of an introductory agricultural economics text book “Economics of Food and Agriculture” that was originally published by Kendall Hunt, in 1990 but has long been out of print. The current version consists of 620 color pdf slide set constituting material for a complete introductory (100-level course) in agricultural economics. All the color slides are contained in an 11 MB pdf file (similar in size to a tablet or iPad application).

The file is ideally suited for downloading by tech-savvy beginning undergraduate agricultural economics student to a variety of devices. I have been experimenting with 7-inch Android tablets, but the file should work equally well on an iPad or perhaps even a smart phone. Obviously the file can also be downloaded to a laptop or desktop computer or any other device that has a pdf reader on it. By downloading the file students suddenly have a complete 620-slide beginning agricultural economics course on whatever device they prefer to use.

The material can also be use by instructors for classroom presentations employing a computer projector. I envision a modern agricultural economics classroom of students with devices of various types in the class having already downloaded same material on the device as what appears on-screen. The slides contain much of the detailed core material, but there is still plenty of space for instructors to do their own things in conjunction with the slides.

There are two files, one containing 620 color pdf slides in 17 chapters. A second file handout file contains the same slides set up for printing on a black-and-white printer, two-to-a-page.

Both of the files are free downloads at <http://ageconsearch.umn.edu>

The “handle” to get directly to the files is <http://purl.umn.edu/162696> All of this is **FREE**, and **EVERY** beginning student in agricultural economics no matter where they are should download the files to the device of their choice!

Background on the revision and updates to the material:

The 1990 versions of this book relied heavily on graphs that constructed by the author using secondary data. Now there are many other sources, most notably the graphs contained in the USDA ERS chart gallery. In updating this version to the present, I retained a few of the graphs that were in the original version, but then located graphs created by the USDA ERS in their chart gallery in order to add to and supplement the original information. These slides were originally constructed employing Harvard Graphics routines. At that point in computing history, clip art as opposed to photographs was being used extensively. By retaining some of the quirky clip art from the original version, I have also retained some of the look and feel of the original edition. It turns out that these slides, with big fonts and quirky clip-art, look particularly neat on a small hand-held device.

Color is important on these slides, which were originally used for GEN 101 taught using these slides by me and several others in the UK ag. econ Department. Students will want to download the color file to their laptops or tablet devices. For the most part, the black-and-white handout looks fine when printed, but for a few of the graphs, the color causes lines or other information to be washed out or a graph or map becomes hard to read. Students should refer back to the color version on their computing devices.

Links for Powerpoint slides for individual chapters for instructors

All of the 600+ slides contained in the book are available to instructors as free downloads. The general Web address for downloading these is [http://www.uky.edu/~deberti/efa/ch"X".ppt](http://www.uky.edu/~deberti/efa/ch) where “X” is the specific one- or two-digit chapter number. Hence, the Powerpoint for chapter 10 can be downloaded at the Web Address <http://www.uky.edu/~deberti/efa/ch10.ppt>

Hot Links for all the chapters as individual Powerpoints are below

Chapter 1: Introduction <http://www.uky.edu/~deberti/efa/ch1.ppt>

Chapter 2: The Structure of Agriculture <http://www.uky.edu/~deberti/efa/ch2.ppt>

Chapter 3: Demand and Supply <http://www.uky.edu/~deberti/efa/ch3.ppt>

Chapter 4: Introduction to Elasticities <http://www.uky.edu/~deberti/efa/ch4.ppt>

Chapter 5: Utility Analysis <http://www.uky.edu/~deberti/efa/ch5.ppt>

Chapter 6: Agricultural Production Economics

<http://www.uky.edu/~deberti/efa/ch6.ppt>

Chapter 7: Producer Cost <http://www.uky.edu/~deberti/efa/ch7.ppt>

Chapter 8: Production with Two Inputs or Outputs

<http://www.uky.edu/~deberti/efa/ch8.ppt>

Chapter 9: Alternative models of Competition

<http://www.uky.edu/~deberti/efa/ch9.ppt>

Chapter 10: Agricultural Marketing <http://www.uky.edu/~deberti/efa/ch10.ppt>

Chapter 11: Credit in Agriculture <http://www.uky.edu/~deberti/efa/ch11.ppt>

Chapter 12: Public Policy <http://www.uky.edu/~deberti/efa/ch12.ppt>

Chapter 13: Economics of Resources <http://www.uky.edu/~deberti/efa/ch13.ppt>

Chapter 14: Trade in Agricultural Goods

<http://www.uky.edu/~deberti/efa/ch14.ppt>

Chapter 15: Economic Systems in Other Countries

<http://www.uky.edu/~deberti/efa/ch15.ppt>

Chapter 16: World Food <http://www.uky.edu/~deberti/efa/ch16.ppt>

Chapter 17: Rural Economic Development

<http://www.uky.edu/~deberti/efa/ch17.ppt>

These Powerpoint figures are backward compatible and should work on early Windows based machines at least as far back as those running Office 97.

Agricultural Production Economics

(Second Edition, 2012)

David L. Debertin

Agricultural Production Economics (Second Edition, Amazon Createspace 2012) is a revised edition of the Textbook Agricultural Production Economics published by Macmillan in 1986 (ISBN 0-02-328060-3). This is intended primarily for adoption at the beginning graduate level although a few institutions are using this also at the upper-division undergraduate level.

The beauty of the linkage at the three levels is that Agricultural Production Economics uses a lot of the same or closely-related numerical examples that students who have used Applied Economics will have already seen at the upper-division undergraduate level. There is a real advantage to having the same author writing the materials at all different levels. Agricultural Production Economics is available as a **FREE** e-download at <http://purl.umn.edu/158319>

Amazon also has bound print copies of the book at amazon.com at a nominal price (about \$19) for classroom use. Again, students can download the file but I recommend the paper copy for serious study.

http://www.amazon.com/Agricultural-Production-Economics-Second-Edition/dp/1469960648/ref=sr_1_1?ie=UTF8&qid=1390834585&sr=8-1&keywords=debertin

The 428 pp. book can also be ordered through college bookstores using the following ISBN numbers:

ISBN-13 978-1469960647

ISBN-10 1469960648

A companion 100-page color book Agricultural Production Economics (The Art of Production Theory) is also a free pdf download at <http://purl.umn.edu/158320>

For instructors who want a color Powerpoint version of all of these figures from Agricultural Production Economics for display in the classroom, this link provides a free electronic download to all of them in ppt format

<http://www.uky.edu/~deberti/colorbookppt.ppt>

A bound 100-pp. print copy is also available on amazon.com at a nominal cost (about \$25, probably cheaper than buying color toner to print the file). Here is the Amazon link:

http://www.amazon.com/Agricultural-Production-Economics-The-Theory/dp/1470129264/ref=sr_1_2?ie=UTF8&qid=1390834585&sr=8-2&keywords=debertin

The companion book can also be ordered through bookstores under the following ISBN numbers:

ISBN- 13: 978-1470129262

ISBN- 10: 1470129264

Papers, spreadsheets and other files connected to *Agricultural Production Economics Second Edition*:

The article that started it all:

“Developing Realistic Production Functions for Use in Undergraduate Classes.” *S. Journ. Agr. Econ* 17:2, 1985, 207-214.

free download at <http://purl.umn.edu/29983>

This article was written prior to the 1986 edition of the book. The SAS code in this article still works with only minor changes. If you want to do the same thing using a spreadsheet, download

<http://www.uky.edu/~deberti/ap/SJAE.xlsx>

Matrix multiplication and inversion in spreadsheets (used in 1985 article)

<http://www.uky.edu/~deberti/ap/mat.xlsx>

Simple MPP and APP using basic model from 1985 article

<http://www.uky.edu/~deberti/ap/mppapp.xlsx>

Basic single input production spreadsheet

<http://www.uky.edu/~deberti/ap/single.xlsx>

Complete single input production spreadsheet

<http://www.uky.edu/~deberti/ap/main.xlsx>

Deriving AC and MC curves

<http://www.uky.edu/~deberti/ap/acmccurves.xlsx>

Single-input profit from the input and output side

<http://www.uky.edu/~deberti/ap/profitinputoutput.xls>

Production and cost simple power production function

<http://www.uky.edu/~deberti/ap/prodcostpower.xlsx>

Basic Production and Cost

<http://www.uky.edu/~deberti/ap/prodcost.xlsx>

Figure 5.1 from text

<http://www.uky.edu/~deberti/ap/fig51.xlsx>

General program for doing unconstrained max, min and saddles

<http://www.uky.edu/~deberti/ap/unconstrainedg.xlsx>

Minimum

<http://www.uky.edu/~deberti/ap/min.xlsx>

Maximum

<http://www.uky.edu/~deberti/ap/max.xlsx>

Saddle without cross term

<http://www.uky.edu/~deberti/ap/saddle.xlsx>

Saddle point with cross term

<http://www.uky.edu/~deberti/ap/saddle1.xlsx>

Bradfordian polynomial

<http://www.uky.edu/~deberti/ap/poly.xlsx>

Polynomial production function from "journ"

<http://www.uky.edu/~deberti/ap/journ3d.xlsx>

Polynomial production function from "journ" version 2

<http://www.uky.edu/~deberti/ap/journ3D2.xlsx>

Basic 3D profit

<http://www.uky.edu/~deberti/ap/basic3Dprofit.xlsx>

Pseudo scale line drawing in XLSX file (ignore circular reference)

<http://www.uky.edu/~deberti/ap/pslinesa.xlsx>

Cobb Douglas with pseudo scale lines

<http://www.uky.edu/~deberti/ap/cdpseudo.xlsx>

Small LP from book solved on spreadsheet

<http://www.uky.edu/~deberti/ap/lpsimple.xlsx>

Harvard Graphics (now Powerpoint) software featured in "An Animated Instructional Model for Teaching Production Economics with computer Graphics. Am. Jour. Agr. Econ. 1993, May, 1993. 485-491

<http://www.uky.edu/~deberti/ap/journ.ppt>

A basic 3D graphics program in SAS. Copy and paste each program into PC SAS editor, then run

<http://www.uky.edu/~deberti/ap/graph10.txt>

1985 SJAЕ article SAS code edited

<http://www.uky.edu/~deberti/ap/SJAESAS.txt>