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ABSTRACT

The 66th and 67th Texas legislatures mandated that an economics course with an emphasis on the free enterprise system and its benefits be a required course for all students graduating from Texas high schools. This paper presents an analysis of the 1982-1988 textbooks adopted for that course. The key concepts evaluated were: definition of economics, definition of economic problems, economic resources, economic goals, economic systems definitions, gains from capitalism, gains from socialism/communism, generic gains, weaknesses of economic systems, personalities of capitalism, and personalities of communism. The texts examined were: (1) "Economics of Our Free Enterprise System" (K. Brown and others); (2) "Essentials of Economics and Free Enterprise" (R. Hodgetts, T. Smart); (3) "Fundamentals of the American Free Enterprise System" (R. Hodgetts, T. Smart); (4) "Hard Choices: The Economics of the American Free Enterprise System" (W. Luker, G. Luker); (5) "Free Enterprise--The American Economic System" (R. Smith and others); (6) "Consumer Economic Problems" (R. Warmke, E. Wyllie); (7) "Invitation to Economics" (L. Wolken, J. Glocker). The findings are presented in three tables and one graph. (PPB)

Texas High School Free Enterprise Textbooks

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INTRODUCTION

The 66th and 67th Texas Legislatures mandated that an economics course with an "Emphasis on the Free Enterprise System and its Benefits" be a required course for all students graduating from Texas High Schools. The State Board of Education of the State of Texas stated that this Economics Course should include the following essential elements:

The student should be provided opportunities to:

a) identify characteristics, benefits and goals of the American Free Enterprise System.
b) analyze the roles of economic incentives, voluntary exchanges, private property rights, and competition.
c) understand the role of business in the Free Enterprise System.
d) examine the roles of labor and consumers in the American Free Enterprise System.

This paper will presents the results of the first stage of a three stage project. The three stages are as follows:

(1) analysis of the 1982-1988 adopted textbooks
(2) analysis of the 1989-1894 adopted textbooks
(3) compare and contrast the results of (1) and (2)

In this first stage key chapters of the 1982-1988 books are analyzed to determine their success in presenting material supportive or the essential elements.

METHODOLOGY

In approaching the content analysis of a paper or text the researcher must summarize thousands of words into much fewer selected categories to isolate similarities and differences. Robert Philip Weber's Basic Content Analysis (1985) offers an overview of the problems and solutions associated with category creation and application.

The key objective of content analysis is to ensure that the classifications, results, and conclusions are reliable and valid. The two major decisions in creating categories concern the degree of category exclusivity and the degree of category detail. Several methods of category creation have been used for content analysis. One employs key words or phrases that the researcher finds in the material to be analyzed. Another builds a set of categories based on one concept or idea. A third creates general dictionaries with definitions and rules for classification.

In this project a set of categories was developed for the basis of analysis. Because a computer program was available to assist in classification, the sentence was chosen as the primary

research unit with words as the measuring parameter. A sentence is unified when all of its parts combine to form one clear thought. When sentence unity is violated, the researcher must break the sentence into separate research units and categories. Using the sentence, and if necessary breaking it into parts, directly counters the unreliability of paragraphs and entire texts as units of measurement and has some of the advantages of theme units.

A rule helps to eliminate researcher error in the actual classification activity. The coding process adheres to a cycle of a one hour coding segment followed by a one half hour recess, repeated until the text is analyzed. This procedure reduces fatigue and erroneous assignments.

Key Concepts Used

I. Definition of Economics
- 1a wealth
- 1b social science
- 1c study of man
- 1d scientific method

II. Definition of Economic Problems
- 2a scarcity--wants versus needs
- 2b what to produce
- 2c who gets production
- 2d how to produce
- 2e when to produce
- 2f other problems

III. Economic Resources
- 3a natural resources--land
- 3b human--labor
- 3c capital
- 3d management
- 3e entrepreneur

IV. Economic Goals
- 4a macro goals in general
- 4b full employment
- 4c price stability
- 4d economic growth
- 4e growth of system
- 4g increasing standard of living

V. Economic Systems definitions
- 5a tradition
- 5b command--central authority
- 5c market
- 5d laisse faire capitalism
- 5e modern capitalism

VI. Gains from capitalism
- 6a living standards
- 6b freedoms
- 6c incentives
- 6d income

VII. Gains from Socialism/Communism
- 7a classless
- 7b guarantees
- 7c social

VIII. Generic Gains
- 8a production
- 8b specialization
- 8c technological
- 8d other

IX. Weaknesses of Economic Systems
- 9a capitalism
- 9b communism
- 9c socialism

X. Personalities of capitalism
- 10a Perot
- 10b Adam Smith
- 10c Ford
- 10d Von Mises

XI. Personalities of communism
- 11a Marx
- 11b Lenin
- 11c Engels
- 11d Stalin
- 11e Mao

FINDINGS

Table 1. presents the percentage breakdown of the introductory chapters analyzed according to the categories presented above. The first column lists the categories in the same order as they are found in Key Concepts Used. The cells of the remaining columns represent the amount of narrative devoted to a particular category (row) in the textbook identified at the top of the each column. The double lines (=) above and below certain rows indicate that those rows are the generic categories and the cell percentages are total of the subcategories. Each generic category set is separated by a blank row.

Table 1.
percentage of narrative assigned to all categories in 11 sets defined by each generic category

		Wolken	Brown	Hodget	Warmke	Smith	Luker	Hodsma
I.	Def.eco.	5.34%	3.82%	0.30%	6.15%	1.72%	1.03%	7.49%
	wealth	0.00%	0.21%	0.00%	2.60%	0.03%	0.00%	0.00%
	soc/sci.	0.42%	0.14%	0.00%	0.00%	0.00%	0.00%	1.92%
	studyman	0.31%	3.47%	0.30%	3.55%	1.69%	0.54%	4.29%
	scimeth.	4.61%	0.00%	0.00%	0.00%	0.00%	0.49%	1.27%
II.	Def.pro.	32.75%	35.83%	0.94%	22.14%	14.09%	36.84%	16.13%
	scarcity	6.29%	30.46%	0.42%	9.68%	8.02%	14.78%	6.46%
	produce	12.23%	1.38%	0.09%	2.02%	2.23%	1.07%	2.02%
	who/gets	0.78%	0.98%	0.13%	2.35%	1.14%	1.52%	0.66%
	how/prod	0.88%	1.20%	0.08%	0.13%	0.04%	0.18%	0.68%
	when/pro	0.00%	0.09%	0.00%	0.02%	0.00%	0.00%	0.05%
	other	12.57%	1.72%	0.22%	7.93%	2.66%	19.29%	6.27%
III.	Eco.res.	5.37%	7.88%	14.09%	2.52%	4.27%	1.43%	10.17%
	natural	0.88%	3.64%	1.14%	0.19%	2.98%	0.16%	3.50%
	human	2.22%	0.85%	5.84%	0.20%	0.39%	0.16%	1.59%
	capital	1.55%	2.38%	2.37%	1.08%	0.66%	0.41%	2.04%
	manage	0.01%	0.00%	3.91%	1.05%	0.03%	0.38%	1.47%
	entrepre	0.72%	1.02%	0.83%	0.00%	0.26%	0.31%	1.57%

IV.

E. goals	0.42%	0.00%	0.13%	15.53%	0.23%	2.58%	3.44%
macro	0.42%	0.00%	0.13%	8.53%	0.23%	0.00%	0.44%
full/emp	0.00%	0.00%	0.00%	1.84%	0.00%	0.00%	1.14%
price/st	0.00%	0.00%	0.00%	1.66%	0.00%	0.00%	0.37%
grow/eco	0.00%	0.00%	0.00%	0.30%	0.00%	0.73%	0.10%
grow/sys	0.00%	0.00%	0.00%	0.99%	0.00%	1.85%	0.31%
up/live	0.00%	0.00%	0.00%	2.21%	0.00%	0.00%	1.07%

V.

Eco.S.D.	21.91%	23.74%	30.53%	12.04%	21.84%	25.34%	8.36%
tradit.	0.41%	5.03%	1.77%	2.43%	3.43%	8.69%	0.00%
command	1.37%	7.14%	6.30%	2.08%	4.68%	8.65%	0.52%
market	16.20%	5.36%	9.09%	6.37%	8.44%	6.98%	4.51%
laiss/c.	0.78%	2.29%	0.81%	0.00%	1.88%	0.00%	0.72%
mod/cap	3.15%	3.93%	12.56%	1.16%	3.42%	1.03%	2.61%

VI.

Gns.Cap.	17.19%	3.05%	12.02%	4.91%	12.41%	1.14%	6.35%
live/st.	0.56%	0.41%	4.11%	0.00%	6.18%	0.26%	1.63%
freedoms	8.27%	2.12%	5.94%	1.58%	2.86%	0.31%	2.25%
incent.	6.58%	0.52%	0.81%	0.70%	3.32%	0.30%	0.60%
income	1.79%	0.00%	1.13%	2.63%	0.04%	0.26%	1.87%

VII.

Gn Soc/C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
classles	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
guarante	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
social	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

VIII.	G. Gains	1.13%	3.34%	4.81%	5.31%	1.48%	0.21%	5.74%
	product.	0.21%	1.47%	1.08%	0.85%	0.00%	0.00%	0.86%
	special.	0.00%	0.54%	0.00%	0.30%	0.00%	0.00%	0.00%
	technol.	0.45%	0.00%	3.56%	0.04%	1.48%	0.21%	3.87%
	other	0.47%	1.33%	0.17%	4.12%	0.00%	0.00%	0.00%
IX.	Weak.E.S	0.00%	0.00%	0.00%	0.00%	0.59%	4.30%	1.01%
	capital.	0.00%	0.00%	0.00%	0.00%	0.59%	0.38%	1.01%
	commun.	0.00%	0.00%	0.00%	0.00%	0.00%	3.92%	0.00%
	social.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
X.	Per.Cap.	0.00%	0.00%	5.38%	0.00%	2.20%	0.94%	3.25%
	Perot	0.00%	0.00%	5.33%	0.00%	0.00%	0.00%	0.00%
	Smith	0.00%	0.00%	0.00%	0.00%	2.20%	0.94%	3.25%
	Ford	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%
	Von Mise	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
XI.	Per. Com	0.00%	0.00%	0.25%	0.00%	7.02%	0.00%	0.00%
	Marx	0.00%	0.00%	0.25%	0.00%	1.34%	0.00%	0.00%
	Lenin	0.00%	0.00%	0.00%	0.00%	1.59%	0.00%	0.00%
	Engels	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Stalin	0.00%	0.00%	0.00%	0.00%	4.09%	0.00%	0.00%
	Mao	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 1. has some interesting aspects, for example, while all but Hodget devoted considerable detail to defining the "economic problem" most texts gave surprisingly little space to defining economics.

One category within economic resources which received little attention was that of the entrepreneur. Warmke's textbook made no mention of the concept of the entrepreneur, although it did discuss the role of management in controlling business.

While each text devoted space towards gains achieved from capitalism, the amount given to this topic varied considerably. Brown and Luker each devoted less than 5 percent of their space to gains from capitalism.

Adam Smith received little coverage in most of the textbooks. In fact, four of the texts made no mention of Smith at all. It is surprising that certain personalities are not mentioned. Not one of the textbooks mentioned either Keynes or Friedman.

Coverage of personalities of Communism and Socialism were also limited. Five textbooks made no mention of Karl Marx. All but one also ignored Lenin and Engels.

All of the textbooks gave coverage to gains from capitalism as should be expected since the textbooks were specifically written for that purpose. However the amount of space ranged from Luker with 1.14% to Wolken with 17.19%.

Only one text (Luker) devoted a significant amount of space to pointing out the weaknesses of individual economic systems. Luker in fact devoted more space to this topic (3.92%) than to defining economics (1.03%).

Table 2. isolates the generic categories to better visualize the row and column vectors that are collapsed or decomposed into point vector via correspondence analysis and projected onto the biplot in Figure 1.

To perceive a global view of every research decision made for each textbook via each category we need to think of the matrix in table 2. as two set of data clouds. The first data cloud is the textbook columns seen as seven vector points existing within Euclidian ten-dimensional space, and the second row data cloud is ten vector point found in seven-dimensional space.

(note: Table 2. has twelve rows but rows GFSC and NA are usable category rows. Both rows are marked with a ϕ.)

Table 2.
percent of narrative in 7 textbooks having to do with 12 generic categories

		Wolken	Brown	Hodget	Warmke	Smith	Luker	H&S
	DefE	5.34	3.82	0.30	6.15	1.72	1.03	7.49
	DefP	32.75	35.83	0.94	22.14	14.09	36.84	16.13
	ER	5.37	7.88	14.09	2.52	4.09	1.43	10.17
	EG	0.42	0.00	0.13	15.53	0.23	2.58	3.44
	ESD	21.91	23.74	30.53	12.04	21.84	25.34	8.36
	GFC	17.19	3.05	12.02	4.91	12.84	1.14	6.35
ϕ	GFSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GG	1.13	3.34	4.81	5.31	1.48	0.21	5.74
	WOES	0.00	0.00	0.00	0.00	0.59	4.30	1.01
	PCap	0.00	0.00	5.38	0.00	2.20	0.94	3.25
	PCom	0.00	0.00	0.25	0.00	7.02	0.00	0.00
ϕ	NA	15.88	22.34	31.56	31.39	34.16	26.18	39.08

BIPLOT INTERPRETATION

Biplots (see figure 1.)are generated by analyse des correspondance, a French technique of geometric matrix pattern computer display. The biplot has the prefix "bi" to indicate both clouds of data share the same plot. The two clouds are allowed to merge in the lower two-dimensional space because the French technique forces a sharing of singular values, principal inertias, axes rescaling, and centroids.

Singular values decomposition of a matrix is the foundation of this technique (Eigenvalues/Eigenvectors can be used with more difficulty). Some of the singular values for both clouds are 0.4717, 0.3940, 0.2950. Notice that the principal inertias (PI) in table 3. are both the row (top set - marked by δ) and column (bottom set - marked by ε) summations. Only in this way can lesser space be utilized to approximate spatial relations in two separate and different larger spaces.

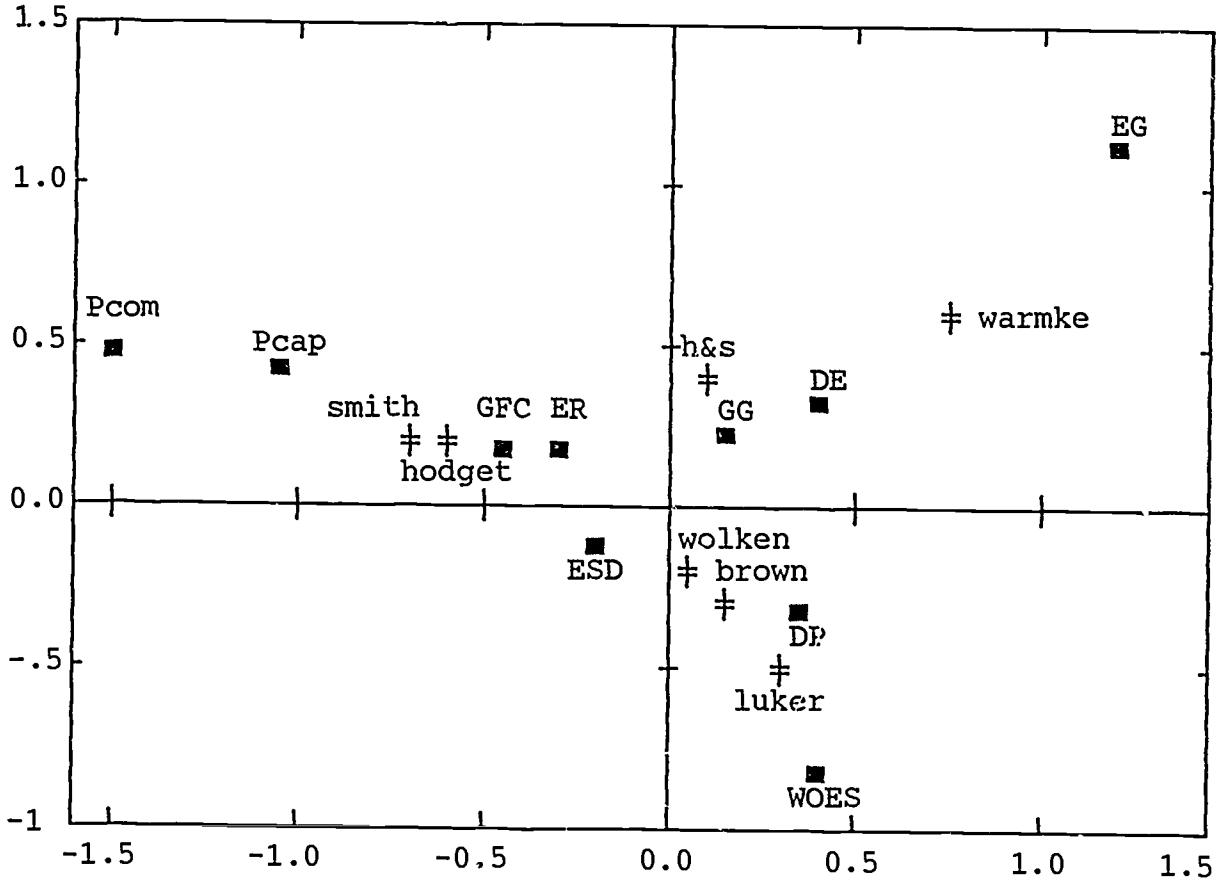

Figure 1. biplot of column and row point vectors

NOTE: • The X axis represents 42.36% of the inertia.
• The Y axis represents 23.19% of the inertia.
65.55%

The 65.55% is interpreted as meaning that the biplot reflects a little over 65% of what we would see if we were able to perceive the Euclidian ten-dimensional column and the seven-dimensional row spaces.

The biplot projections of one cloud reflects the intra-structure or similarities within that cloud. These distances of the vector points in one cloud are defined in terms of the relevant chi-square distance. Therefore, the distances between ǂ points are "real" and can be conceived as distances of similarity if close and distances of dissimilarity if far.

On the other hand distances between point vector of the two clouds, both ■ and ǂ, are simply barycentre in nature and therefore are not "real" (no bars). However, it is not inappropriate

to notice that certain category point vector lie in the direction of specific column vectors, and therefore, strongly influence the location of the column vector in its own Euclidian space.

Table 3. correspondence analysis inertias

δ	DefE	0.0084	0.0053	0.0007	0.0065	0.0075	0.0285 Σ_{ROW}
	DefP	0.0360	0.0281	0.0052	0.0028	0.0005	0.0730 Σ_{ROW}
	ER	0.0097	0.0025	0.0277	0.0004	0.0029	0.0440 Σ_{ROW}
	EG	0.0614	0.0581	0.0028	0.0016	0.0025	0.1264 Σ_{ROW}
	ESD	0.0101	0.0043	0.0013	0.0050	0.0079	0.0290 Σ_{ROW}
	GFC	0.0194	0.0035	0.0007	0.0134	0.0024	0.0443 Σ_{ROW}
	GG	0.0013	0.0033	0.0016	0.0047	0.0019	0.0128 Σ_{ROW}
	WOES	0.0016	0.0069	0.0032	0.0124	0.0020	0.0322 Σ_{ROW}
	PCap	0.0421	0.0069	0.0036	0.0024	0.0022	0.0572 Σ_{ROW}
	PCom	0.0326	0.0029	0.0405	0.0004	0.0005	0.0779 Σ_{ROW}
	PI	0.2225	0.1218	0.0870	0.0496	0.0302	0.5252 $\Sigma_{COLUMNS}$
ε	WOLK	0.0001	0.0072	0.0014	0.0248	0.0024	0.0384 Σ_{ROW}
	BROW	0.0040	0.0198	0.0020	0.0007	0.0002	0.0354 Σ_{ROW}
	HODG	0.0535	0.0045	0.0289	0.0071	0.0034	0.0974 Σ_{ROW}
	WARM	0.0746	0.0484	0.0020	0.0001	0.0029	0.1281 Σ_{ROW}
	SMIT	0.0742	0.0035	0.0408	0.0003	0.0002	0.1192 Σ_{ROW}
	LUKE	0.0151	0.0309	0.0056	0.0166	0.0000	0.0699 Σ_{ROW}
	H&S-	0.0011	0.0075	0.0062	0.0001	0.0211	0.0366 Σ_{ROW}

APPENDIX A.

Textbooks Analyzed

Brown, Kenneth W. (ed.) and others Economics of Our Free Enterprise System. New York, N.Y. Gregg Division, McGraw-Hill Book Company. 1982. (pp. 1-28)

Hodgetts, Richard M. and Smart, Terry L. Essentials of Economics and Free Enterprise. Addison-Wesley Publishing Company, Meno Park, California 1982. (pp. 1-61)

Hodgetts, Richard M. and Smart, Terry L. Fundamentals of the American Free Enterprise System. Addison-Wesley Publishing Company, Menlo Park, California 1978. (pp. 3-22)

Luker, William A. and Luker, Geneva J. Hard Choices: The Economics of the American Free Enterprise System. 2nd edition, Sterling Swift Publishing Company, Austin, Texas. 1981. (pp. 1-37)

Smith, Robert F. and others. Free Enterprise-The American Economic System. Laidlaw Brothers Publishers, Division Doubleday & Company, River Forest, Illinois. 1981. (pp. 9-57)

Warmke, Roman F. and Wyllie, Eugene D. Consumer Economic Problems 9th ed. South-Western Publishing Co. Cincinnati, Ohio. 1977. (pp. 1-35)

Wolken, Lawrence and Glocker, Janet Invitation to Economics. Glenview, Illinois: Scott, Foresman and Company 1982. (pp. 1-46)