SENATE
COMMERCE & LABOR
COMMITTEE

Minutes of Meeting
Wednesday, March 30, 1977

The meeting of the Commerce and Labor Committee was held on March 30, 1977, in Room 131, at 1:40 P.M.

Senator Thomas Wilson was in the chair.

PRESENT: Senator Wilson
Senator Blakemore
Senator Ashworth
Senator Bryan
Senator Close
Senator Hernstadt
Senator Young

ALSO PRESENT: See attached list.

The Committee considered the following:

A.B. 116 PROVIDES FOR INCREASE IN INDUSTRIAL INSURANCE BENEFITS PREVIOUSLY AWARDED PERSONS PERMANENTLY AND TOTALLY DISABLED. (BDR 53-494)

Mr. Claude Evans, N.I.C. Commissioner, said that he was speaking in his own behalf. Mr. Evans gave two examples of individuals who would be affected by this bill, and he said that overall this would affect 378 people (either survivors of deceased workers, or those totally and permanently disabled). The fiscal note for this bill equates to less than 1/2 of 1% of the current annual premium income for N.I.C. Mr. Evans mentioned that he felt that this bill left out orphans whose parent was killed before 1973. To SENATOR HERNSTADT, Mr. Evans said that he felt it was necessary to tie in a type of cost of living index for their benefit.

SENATOR BRYAN asked how you reconcile the fiscal note of $3,221,000 to a $50.00 increase for 378 people? Mr. Evans said that someone will testify on that. To him, however, it comes to approximately $18,900 per month and $226,800 per year. (See Exhibit A - Mr. Evans' remarks)

Mr. John Reiser, Chairman of the Nevada Industrial Commission, said that he suggested that the Committee

consider giving a cost of living increase, possibly in the form of raising the increase to 30%, building on the 10% and 20% that was passed in 1973 and 1975.

SENATOR YOUNG asked Mr. Reiser if he was saying that because of inflation any additional benefits should come from the General Fund rather than the N.I.C. fund. Mr. Reiser said yes, but not only because of inflation, the premiums were calculated based on the benefits that were in the statutes at the time of injury.

SENATOR HERNSTADT asked Mr. Reiser if he was in accord with Mr. Evan's suggestion that the death benefits that will not be granted because the deceased did not have any heirs, be put into a fund for these types of increases? Mr. Reiser said this is the amendment that the Commission supports. SENATOR WILSON said that Mr. Reiser's answer to Senator Hernstadt's question as to whether a benefit should be paid to an estate if there are no survivors was a matter for legislative determination; the Senator said that the Committee concurs that they have jurisdiction, but they would like to have Mr. Reiser's judgment as to what the policy in this situation should be. Mr. Reiser said that it was his general opinion that workmen's compensation was to benefit the survivors, and that the benefits should not go to the State but to the funding for survivor's benefits.

Mr. William A. Dreher, (Exhibit B--Statement of qualifications), gave an actuarial and statistical report on the fiscal note of A.B. 116. Mr. Dreher summarized the points made in a letter he sent to Mr. Reiser (Exhibit C). Mr. Dreher said that he has been working with the Commission for over four years in regards to fiscal notes such as are in this bill and recommended premium levels for employers, as well as annual actuary evaluations. He stated that in these areas, the N.I.C. staff has applied a high quality of care and diligence. Mr. Dreher spoke about the statistics of the chart provided in Exhibit C (last page).

SENATOR WILSON commented that the earnings are not shown on the chart, whether in the form of reserves, etc., accrued by the invested fund. He asked, "What is the earning level to which you would add attributed premiums which would show total income to be compared

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with the expense benefits paid?" And he added that it becomes an obvious question as to whether the premium levels are too high or whether they are reasonable? Mr. Dreher said that the incurred costs include the dollars dispersed and the reserves, and the reserves take into account an assumption that they will earn 3-3/4% per year, so there is an interest discount in arriving at the incurred costs shown.

SENATOR CLOSE asked how Mr. Dreher can testify to a 3-3/4% interest/earning ratio? Mr. Dreher said he would answer this in his presentation. Mr. Dreher said that they are anticipating that 3-3/4% will be earned although in the last several years the results have been better and there is a need to have these funds available in case the reserve estimates prove to be too low, and if this is taken care of, then there can be adjustments on the premium rates, or possible dividends to the employers, etc.

SENATOR CLOSE asked what was the actual income in the years from 1972 to 1976 from reserves? Mr. Bob Haley said that there was a net gain of 12.1 million in earnings from which 4.1 million was deducted and a 2 million dollar dividend was paid to the employers, so that left a net gain of $6.1 million, which went to surplus.

SENATOR HERNSTADT asked if the N.I.C. can invest in stocks? Mr. Dreher said they have the statutory authority to invest up to 30%, but they have only invested from approximately 15% up to 25%, and is currently about 23%. SENATOR HERNSTADT said that the stocks should appreciate and the factor of this appreciation should be calculated into the reserves. Mr. Dreher said this is not done directly, they monitor the investment performance each quarter to take into account total return.

Mr. Haley, Coordinator of N.I.C., gave a handout to the Committee which showed the claimants that would be affected by A.B. 116 (Exhibit D). Mr. Haley said that permanent pensioners who are disabled because of occupational disease are not included in this legislation, and there are 69 individuals in this group. If they were included this would add $362,000 to the cost of the bill. He said there are also 125 children, who are children of fatally injured workers or permanently and totally disabled, and their liability is $308,000. He said there are four parents who were dependent upon

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deceased workers that are excluded from this bill, which is another $12,000. Mr. Haley said there are about 80 individuals who will be receiving additional pensions if they were injured before July 1, 1973, and their estimated liability, which is not included in this bill, is approximately $600,000. He said that this bill does not provide for equalization of those workers who are receiving greater benefits than individuals who were injured after July 1, 1973. And, he also stated, that the bill provides that the increase will be paid from the Accident Benefit Account of the Commission, and this account only pays for medical benefits, not for compensation, so this should be paid from the Compensation Account.

Mr. Haley said that the disparity between his figures and those of Mr. Evans are that his include the benefits that go to out-of-state recipients.

Assemblyman Jim Banner remarked that as sponsor of this bill, his estimation is that this bill will concern 323 people whose average age is 62.9 years.

SENATOR CLOSE said that Mr. Haley had indicated that in some cases, there would be individuals who would receive higher payments than those injured after July 1, 1973. Mr. Banner said the highest payment is $288 per month.

Mr. Banner said that he questions the N.I.C. fiscal notes, as his calculations are much less.

SENATOR YOUNG asked if it would be feasible to add a cost of living increase onto these types of benefits? Mr. Banner said that at this time N.I.C. has approximately over $10 million in free surplus and this could be possible.

Mr. Lou Paley of the Nevada A.F.L.-C.I.O. said that this is the first time he has ever seen such an increase questioned by a Committee. Mr. Paley said that last Session this type of request was made part of the Executive Budget and that there are still funds available in that appropriation. He supported adding the groups that Mr. Haley mentioned to the bill, and adding a cost-of-living increase actuarialy.

Mr. Warren W. Goedert of the Nevada Trial Lawyer's Association, said that he does concur with Mr. Evans and Mr. Banner's remarks. Mr. Goedert said that the fact alone that N.I.C. felt it necessary to bring in

outside actuarial specialists to verify the validity of their fiscal notes should raise some questions by itself. Mr. Goedert stated that his point can be shown by the "flagrant error" made in A.B. 160 where N.I.C. estimated a fiscal note of $1.7 million and that has now been revised to reflect less than $60,000 in costs.

Mr. Ron Landes, a corporate officer of a manufacturing company, said that as an employer "who pays the bills" they are concerned about the conflicting testimony. Mr. Landes said that the claims paid out on his company's premiums are approximately 10% of the amount of premiums paid. In response to SENATOR ASHWORTH, Mr. Landes said that his premiums have increased somewhere between 50% to 100%.

Mr. Mike Chadburn of the Southern Nevada Building Trades Council stated that the widows and children who are affected by this bill also would like to know where the inflation comes from, as some of them are at or near the poverty level of income.

Mr. Howard Winn of the Nevada Mining Association commented that the employers should not be required to pay retroactive benefits. Mr. Winn said that this funding should come from the General Fund. (Exhibit E was submitted by Mr. Reiser on A.B. 116)

A.B. 115 CHANGES PROVISIONS FOR PERMANENT PARTIAL DISABILITY COMPENSATION UNDER NEVADA INDUSTRIAL INSURANCE ACT. (BDR 53-493)

Assemblyman Jim Banner said that this bill involves the disabled and he is concerned that the Legislature has made synonymous the terms disability and impairment. He said that he wants to make it so that an individual can receive a lump sum benefit if he is 20% disabled and he can receive this if he is 65 years of age or over.

SENATOR CLOSE said to Mr. Banner that N.I.C. has made a substantial modification in regards to those with Partial Permanent Disability (PPD) and they have agreed that people in this category can be paid 100%.

Mr. Max M. Blackham of Kennecott Copper Corporation stated as an opposition speaker that their primary concern is the substantial cost impact this measure

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would have on Nevada employers. He remarked, "I respectfully urge all of you gentlemen to consider ways to make our compensation system a sound economic device and not another social benefit program."

Mr. Gary Bullis, a plaintiff attorney, suggested that the A.M.A. guides used by N.I.C. to determine the level of disability is a "socialistic scheme". He stated that when the court system was eliminated as a check on N.I.C. with their "no-fault" insurance, there were many abuses. He asked how much money collected from the employers is used for the "testifying doctors". SENATOR WILSON said that he understands that Mr. Bullis wants an investigation on the costs involved in the medical evaluations and testimonies. Mr. Bullis said that the average N.I.C. recipient gets $200 to $500 per year in pension. He said that the reason for them receiving this small amount is in part the A.M.A. guides. Mr. Bullis used Mr. David Snyder as an example of these low rates Mr. Snyder, before receiving his back injury, was making $1,599.00 per month as a truck driver and now is receiving $1,000 per year in pension from N.I.C.

Mr. Bullis introduced Mr. Daniel Klein who was no longer able to specialize in a specific type of welding skill because of a leg injury. Mr. Bullis remarked that the current law does not account for injuries that preclude the accomplishment of such specific skills because all factors such as age, education and occupational training are not included.

Mr. Lou Paley remarked to Mr. Bullis that "labor has done its part" to get this type of legislation passed. He requested that the law be changed in the area where it currently requires that all benefits cease at age 65 years.

Mr. David Snyder, an injured worker who Mr. Bullis mentioned earlier, said that he "believed in this bill".

Mr. Ed Scott of the Race Relation's Center in Reno, stated that their clients cannot find attorneys to deal with N.I.C., and when they have to deal with them they get the "run-around."

SENATOR YOUNG asked how many a year do they deal with in regards to N.I.C.? Mr. Scott said approximately 35 request assistance each year.

Mr. Emery Castle, an injured worker, stated that he went to four attorneys before he could get one to take the case. He said that he was examined by six different doctors at the hospital at U.C.L.A., and received six different opinions, which he felt was a waste of time and money (Exhibit F and F-1 are letters from an N.I.C. physician and claimant officer who dealt with Mr. Castle's case).

Mr. Mike Chadburn spoke in favor of this measure. Mr. Chadburn said that when a worker is injured prior to the age where he is able to receive his pension payments, he loses all the pension benefits that he has vested up to that point.

Mr. Robert Haley submitted figures dealing with the fiscal note of A.B. 115 (Exhibit G).

SENATOR CLOSE asked what was the testimony in the Assembly as to the intention of the bill regarding its retroactive possibility? Mr. Haley said that John Reiser stated that it was N.I.C.'s interpretation that the bill is retroactive. SENATOR WILSON said that the question was, what is the intention of the sponsor of this measure?

Mr. Haley said that generally in the year of the injury in paying benefits to PPD's, the pattern of payout is 5-10%; the first year following that, the payout is 30-35%; the second year, 60-70% is settled; the third year 85-90%; the fourth year 94-96%; and, the remainder is paid out in 1%-2% per year.

Mr. Haley said that N.I.C. handled 2.15 more claims in 1976 than in 1969. He said that in 1969, the maximum payout for PPD with 43% other factors for a 10% disability was $2,860, and in 1976 the average payout was $12,513.

SENATOR YOUNG asked Mr. Haley to restate his estimate of the value of payouts today. Mr. Haley responded that the value of the awards that are being paid today are 4.375% higher. SENATOR YOUNG said that they had determined the expense retroactively by applying the other factors to claims of 1973, and the Senator questioned how this was done? Mr. Haley said that they have to rely on sampling and they used 600 random claims that had been settled and broke them down for disability and the other factors.

SENATOR WILSON asked N.I.C. to provide a breakdown of

the $14,376,000 in the first year of the biennium and the $16,920,000 in the second year in order that the Committee could know the components of that fiscal impact and how it was computed.

(Exhibit H is the written supplemental provided to the Committee to answer the questions proposed at this hearing.)

Mr. Gordon W. Rice, an attorney, said that he has had more cases over the years than any other attorney involving industrial insurance. Mr. Rice said that it is not realistically possible to evaluate disability without "other factors". He stated that he never saw N.I.C. give 45% for other factors. Mr. Haley answered Mr. Rice by saying that, "if an individual is entitled to a 10% impairment for example, the previous Commission would add say another 5% for other factors, and that constitutes a 50% increase on the 10% that was awarded as an impairment, and that is where the 43% figure comes from." Mr. Rice commented that he felt the presentation was very deceiving.

Mr. Haley said that the Commission does need a program that concentrates on maximizing ability as opposed to maximizing disability.

To Senator Hernstadt, Mr. Haley said that the cost for the coming fiscal year on "other factors" if included in the benefits would be $7,939,000, which would represent approximately a 10% increase in the level of premium.

SENATOR YOUNG said there is much merit in considering the full impact on an individual who no longer has the right to sue. Mr. Reiser said that the rehabilitation is different for each case and a great number of dollars is being spent on this on-the-job training. Mr. Reiser said that as far as the rehabilitation program is concerned, the "other factors" are being considered.

Mr. Richard Ciesynski, an ironworker from Sparks, said that his workers have not had the benefit of any rehabilitation programs. Mr. Ciesynski said that he supports the concept of lump-sum settlements and is in favor of the bill.

Ms. Marilyn Boussaid, the wife of an injured worker, submitted a written testimony for the record (Exhibit I).

Mr. Warren W. Goedert, of the Nevada Trial Lawyer's Association, said that in certain instances, rehabilitation does not work, and in those cases "other factors" is a must. Mr. Goedert gave examples of individuals who would not be able to work, but were considered less than 100% disabled by N.I.C. because the other factors were not given the proper consideration. Mr. Goedert stated that it was himself that submitted a press release regarding the fact that A.B. 115 was not retroactive.

SENATOR WILSON said that he did not want this further debated, and for the record he read a letter from Mr. Frank Daykin of the Legislative Counsel Bureau where he stated that the fiscal note was drafted with the intention of being retroactive (Exhibit J). However, SENATOR WILSON said that he understands that it is not the intent of the author of the bill that the fiscal note be applied retroactively.

Mr. Kelly Gold, President of Retail Clerk's Union of Reno, stated that he was in favor of A.B. 115.

Mr. Roger Mundy said that he had been through the rehabilitation program, and comparatively, he had been making a salary of approximately $800.00 per month, and is now making $2.30 per hour.

S.B. 371 REGULATES GROCERY STORES WITH AUTOMATIC CHECKOUT SYSTEMS. (BDR 51-1274)

Mr. Lou Paley of the A.F.L.-C.I.O. said that his organization does support S.B. 371. Mr. Paley introduced Mr. Jerry Lynch who is the public relations director for the Southwestern's States Council for Retail Clerks Union.

Mr. Jerry Lynch read his submitted statement on S.B. 371 (Exhibit K). Mr. Lynch also submitted a study done in the California Legislature on the subject of computerized checkout systems (Exhibit L). Mr. Lynch said that some stores wish to remove the readable arabic numbers for pricing and just use the computer markings, but he felt this would be too unreliable for the consumer as shelf markings are often inadequate and incorrect.

SENATOR YOUNG asked if it was correct that when food is purchased in these computerized stores that the consumer receives a print-out with the item and the price? Mr. Lynch said that is correct.

Senator Mary Gojack said that it had been estimated that in order to maintain individual item pricing, it would cost the consumer approximately only $1.00 per year. She would see this as a benefit to the consumer.

Mr. Pete Kelley of the Nevada Retail Association read a submitted statement (Exhibit M) in which he said that he opposed S.B. 371.

SENATOR WILSON asked how will this legislation interfere with the pilot program at Safeway's in Carson City? Mr. Kelley said that this bill would require that at the end of this year no such testing could be continued in the State. He said that he knows that Safeway employees price mark about 215 million packages each week throughout this entire district.

Mr. Kelley submitted a sales slip from Safeway which shows discounts, and unit prices (Exhibit N). Mr. Kelley said to Senator Young that there is a very legible price on the shelf in these computerized stores.

Kelly Gold, Retail Clerks Union, asked if all Safeway stores have the same pricing system? Mr. Gold stated that different Safeway stores (A, B and C stores) may charge different prices for the same items.

Mr. Lynch said to SENATOR HERNSTADT that in regards to number of jobs lost due to this new type of system, the price-marking is the smallest area of loss. He said that the loss of jobs will probably be in checkers. Mr. Lynch said that this type of system is more efficient in regards to inventory, warehousing and coupon discounts.

S.B. 383 REQUIRES NEVADA INDUSTRIAL COMMISSION TO PROVIDE TOLL-FREE TELEPHONE SERVICE TO CLAIMANTS. (BDR 53-1304)

SENATOR HERNSTADT said as sponsor of this measure that it is unfair that in some areas citizens cannot reach a state service.

Mr. John Reiser said that N.I.C. is covered by a watt line service except for areas such as Lathrop Wells, Tonopah and Goldfield.

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S.B. 373 INCLUDES TIPS AS WAGES FOR PURPOSES OF UNEMPLOYMENT COMPENSATION. (BDR 53-1199)

SENATOR FAISS requested that Senator Hernstadt state to the Committee that he would like to have action on this bill held until A.B. 359 is received by the Senate.

S.B. 391 LOWERS THRESHOLD FOR FULL REGULATION OF LAND DIVISIONS. (BDR 22-1217)

This bill has been re-referred between Government Affairs and Commerce and Labor Committees. CHAIRMAN WILSON is to get the matter settled for the Committee.

S.B. 413 MAKES SUBSTANTIAL CHANGES IN PROCEDURE FOR DISCIPLINING PHYSICIANS. (BDR 54-1798)

Motion was made by SENATOR YOUNG to re-refer S.B. 413 to the Senate Committee on Judiciary.
Seconded by SENATOR HERNSTADT.
The Motion passed. (SENATOR BLAKEMORE voted "NO")
SENATORS ASHWORTH and CLOSE were absent.

BDR 57-1515 PERMITS INSURANCE BROKER TO FILE APPROVED SECURITY INSTEAD OF BOND.

Motion was made by SENATOR BRYAN for Committee Introduction.
Seconded by SENATOR YOUNG.
The Motion passed.

BDR 7-1340 PROHIBITS UNDER CERTAIN CIRCUMSTANCES ACCEPTANCE OF INCORPORATION DOCUMENTS FOR FILING WHERE NAME OF CORPORATION CONTAINS SPECIFIED TERMS RELATING TO ENGINEERING.

Motion was made by SENATOR YOUNG for Committee Introduction.
Seconded by SENATOR BRYAN.
The Motion passed.

BDR 54-1339 RELATES TO PROFESSIONAL ENGINEERING AND SURVEYORS AMENDING VARIOUS REGULATORY PROVISIONS OF LAW AND OTHER MATTERS.

Motion was made by SENATOR YOUNG for Committee Introduction.
Seconded by SENATOR HERNSTADT.
The Motion passed.

BDR 53-1442 ENUMERATING SPECIFIED PLANS AND FUNDS TO WHICH THE FAILURE OF AN EMPLOYER TO MAKE CERTAIN PAYMENTS IS UNLAWFUL.

Motion was made by SENATOR YOUNG for Committee Introduction.
Seconded by SENATOR BLAKEMORE.
The Motion passed. (SENATOR HERNSTADT abstained)

S.B. 373 INCLUDES TIPS AS WAGES FOR PURPOSES OF UNEMPLOYMENT COMPENSATION. (BDR 53-1199)

Motion was made by SENATOR BRYAN that this bill be held for further testimony and pending action of A.B. 359.
Seconded by SENATOR YOUNG.
The Motion passed.

S.B. 371 REGULATES GROCERY STORES WITH AUTOMATIC CHECKOUT SYSTEMS. (BDR 51-1274)

Motion was made by SENATOR HERNSTADT for Indefinite Postponement.
Seconded by SENATOR YOUNG.

The Committee discussed the pros and cons of this measure and decided not to vote on S.B. 371 until they could personally observe the Safeway operation here in Carson City.

A.B. 116 PROVIDES FOR INCREASE IN INDUSTRIAL INSURANCE BENEFITS PREVIOUSLY AWARDED PERSONS PERMANENTLY AND TOTALLY DISABLED. (BDR 53-494)

Motion was made by SENATOR BRYAN to amend and DO PASS.
Seconded by SENATOR HERNSTADT.
The Motion passed. Vote: SENATORS BLAKEMORE, BRYAN WILSON, HERNSTADT and YOUNG.
(SENATORS CLOSE and ASHWORTH absent)

A.B. 290 PROVIDES FOR REFUNDS OF UNEARNED MORTGAGE LOAN FEES. (BDR 54-744)

Motion made by SENATOR BRYAN to amend and DO PASS.
Seconded by SENATOR HERNSTADT.
Vote: In favor of amend and DO PASS: SENATORS BRYAN, WILSON, BLAKEMORE, HERNSTADT and YOUNG.
Amendment: Change subsection 1 to exclude banks and savings and loans who are presently regulated . . . those who are presently licensed.
Amendments to be made consistent with S.B. 313.
SENATORS CLOSE and ASHWORTH absent from above vote.

S.B. 304 RAISES MONETARY THRESHOLD WHICH COSTS OF MEDICAL TREATMENT MUST EXCEED BEFORE INJURED PERSON MAY RECOVER DAMAGES FOR NONECONOMIC DETRIMENT RESULTING FROM MOTOR VEHICLE ACCIDENT. (BDR 57-1082)

Motion made by SENATOR YOUNG to indefinitely postpone.
Seconded by SENATOR BLAKEMORE.
Vote: In favor of Motion: SENATORS BRYAN, WILSON, BLAKEMORE, YOUNG and HERNSTADT.
SENATORS CLOSE and ASHWORTH absent.

S.B. 306 MODIFIES EXISTING LAW TO PERMIT ONLY PERSONS WHO HAVE SUFFERED CERTAIN SERIOUS INJURIES RESULTING FROM A MOTOR VEHICLE ACCIDENT TO RECOVER DAMAGES FOR NONECONOMIC DETRIMENT. (BDR 57-1081)

Motion was made by SENATOR YOUNG to indefinitely postpone.
Seconded by SENATOR BLAKEMORE.
Vote: Yes to KILL: Senators BRYAN, WILSON, BLAKEMORE and YOUNG. NO: SENATOR HERNSTADT.
SENATORS CLOSE and ASHWORTH absent.

S.B. 350 REPEALS BASIC REPARATIONS PROVISIONS OF AUTOMOBILE INSURANCE. (BDR 57-1216)

Motion was made by SENATOR YOUNG to indefinitely postpone.
Seconded by SENATOR BRYAN.
Vote in favor: SENATORS BRYAN, WILSON and YOUNG.
NO: SENATORS HERNSTADT and BLAKEMORE.
SENATORS CLOSE and ASHWORTH absent.
Motion failed.

There being no further business the meeting was adjourned at 6:46 P.M.

Respectfully submitted,

Lyndl Lee Payne, Secretary

APPROVED BY:

Thomas R.C. Wilson, Chairman

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DATE

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TESTIFYING?	NAME	ORGANIZATION	ADDRESS	PHON
✓	Joe Jackson	NEV. STATE PRESS ASSN	RENO	826244
	Wm Pontes	Ironworker	Reno #118	78615
	W H Brunson	IronWoker	Reno #118	786154
✓	Daniel M. Kleen	Ironworkers	Reno #118	673-400
✓	Richard Olszynski	IronWorkers #118	Sparks Nev.	358-6292
	John Tyler	Iron Workers	Silver Springs #118	577-227
	Jim Eukanas	Ironworker	Reno	—
✓	Howard W[illegible]	Nevada Mining Ass.	Reno	—
✓	Max M. Blackhurn	Kennecott Copper	McGill	235-774
	Jack B. Crawford	Sagono-Sierra Ins.	Carson City	883-1582
	Tom [illegible]	Nev. State [illegible]		
	Gayle Amcoklar	NTLA	Reno	786-1858
	GORDON W. RICE	Attorney-former Judge	Reno	3290103
✓	WARREN W. GOEDERT	NTLA	Reno	3296275
	Maryann Dickens	Lift Engr.	C.C.	882-0660
	W F Wilson	Iron Workers	Reno	323-[illegible]
✓	Gary Bullis	Nevada Trial Lawyers	Reno	32917[illegible]
✓	Marilyn Boussaid	self	Reno	323-53[illegible]
✓	Mike Chadburn			

SENATE

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TESTIFYING?	NAME	ORGANIZATION	ADDRESS	PHON
YES ✓	W. A. DREHER	DREHER ROGERS ASSOC	New York City	
No	[illegible] M. Beckett	NIC-legal	C C, Nev	885-537
No	M. J. Brown	TIMET	HENDERSON	
Yes	[illegible] Blacklen	TIMET	Henderson	564-1
yes	Glen A. [illegible]	B.M.I.	Henderson	565-6
yes ✓	R. S. [illegible]	NIC	Carson	885 5352
yes	Thomas W. Cose	Central Tel. Co.	Las Vegas	385-51
No	Skip King	NIC	Las Vegas	
	[illegible] Bowen	NIC	Sparks	358-[illegible]
✓	Roger Mudley	NIC	Sun Valley	673-182
yes	D. Shelton	Owner Business	1550 Church Reno	835 [illegible]
YES ✓	CLAUDE EVANS	N.I.C.	515 E. MUSSER	885-528
YES ✓	JOHN REISER	NIC	515 E MUSSER	885-524
yes ✓	EMERY Castle	NIC	Reno	972-05
	Ida M. Street	Housewife	Carson	882-44
	Dorothy Galbert	Housewife	Sun Valley, NV	673-200
	Paul R. Galbert	NIC	Sun Valley NV	673-200
	H. C. Jensen	"		329431
✓	David A. [illegible]	"	[illegible]	—
	Edwin [illegible]	NIC	5575 Leon Sun Valley	673276
✓	ROWLANDES	RICHOEL INC	1851 Oregon St.	882-6786
	DEL BLAIR	NEUMODYNE	525 FAIRVIEW	883-340
	J. C. Lewis	Walker Boudwin	624 East 4th	323-0361
	Lou Paley	NFL CIO		
	Ed Scott			

SENATE

AGENDA FOR COMMITTEE ON COMMERCE & LABOR

WEDNESDAY

Date March 30, 1977 Time 1:30 P.M. Room 131

Bills or Resolutions to be considered	REVISED Subject	Counsel requested*
A. B. 115	Changes provisions for permanent partial disability compensation under Nevada Industrial Insurance Act (BDR 53-493)	
A. B. 116	Provides for increase in industrial insurance benefits previously awarded persons permanently and totally disabled (BDR 53-494)	
	4:00 P.M.	
S. B. 383	Requires Nevada industrial commission to provide toll-free telephone service to claimants (BDR 53-1304)	
S. B. 373	Includes tips as wages for purposes of unemployment compensation (BDR 53-1199)	
S. B. 371	Regulates grocery stores with automatic checkout systems (BDR 51-1274)	

*Please do not ask for counsel unless necessary.

Exhibit A
3-30-77

TESTIMONY OF CLAUDE EVANS TO SENATE LABOR COMMITTEE

MR. CHAIRMAN AND COMMITTEE MEMBERS:

ASSEMBLY BILL 116, PERTAINS TO BENEFITS FOR SURVIVORS OF FATALLY INJURED WORKERS, AND NEVADA WORKERS WHO ARE PERMANENTLY AND TOTALLY DISABLED PRIOR TO JULY 1, 1973. I THINK IT IS VERY IMPORTANT THAT WE KEEP IN MIND EXACTLY WHO WE ARE TALKING ABOUT.

1. IN ORDER FOR SURVIVOR BENEFITS TO BE PAID, THERE HAS TO BE A NEVADA WORKER KILLED IN AN INDUSTRIAL ACCIDENT PRIOR TO JULY 1ST, 1973. WE HAVE 213 FAMILIES IN THIS CATEGORY.
2. IN ORDER FOR PERMANENT TOTAL DISABILITY BENEFITS TO BE PAID, A NEVADA WORKER HAS TO SUFFER AN INJURY OF SUCH MAGNITUDE AS TO BE PERMANENTLY AND TOTALLY DISABLED TO EARN MONEY IN AN OPEN LABOR MARKET PRIOR TO JULY 1ST, 1973. WE HAVE 165 DISABLED WORKERS IN THIS CATEGORY.

THERE ARE THOSE WHO WILL RELAY INFORMATION TO YOU CONCERNING THE TOTAL COST OF SAID LEGISLATION, AND RIGHTLY SO, BUT I FEEL THAT IT IS MY RESPONSIBILITY TO POINT OUT TO YOU WHAT THIS LEGISLATION MEANS TO THE INDIVIDUAL WHO IS RECEIVING THESE BENEFITS. I WOULD LIKE TO GIVE YOU TWO EXAMPLES OF INDIVIDUALS THAT THIS BILL WILL AFFECT, AND EXACTLY WHAT THEY WOULD RECEIVE UNDER THIS LEGISLATION:

ON DECEMBER 22, 1972, A NEVADA WORKER WAS KILLED IN AN INDUSTRIAL ACCIDENT. HIS WIFE WAS GRANTED A SURVIVORS BENEFIT OF $167.50 PER MONTH, THE MAXIMUM ALLOWED AT THAT TIME. IN THE 1973 SESSION OF THE LEGISLATURE, THERE WAS A 10% INCREASE GRANTED TO SURVIVORS IN THIS CATEGORY, AND IN THE 1975 SESSION AN ADDITIONAL 10% WAS GRANTED; SO THEREFORE THIS LADY NOW RECEIVES $167.50 PER MONTH, PLUS 20% WHICH IS $33.50 PER MONTH, FOR A TOTAL MONTHLY SURVIVORS BENEFIT OF $201.00. THIS LADY IS 52 YEARS OLD, NEVER BEEN EMPLOYED IN HER LIFE, AND IS NOT ELIGIBLE FOR SOCIAL SECURITY BENEFITS BECAUSE OF HER AGE. HER HUSBAND MADE A SALARY OF $18,000 IN THE YEAR PRECEDING HIS DEATH. UNDER

THE LEGISLATION BEING CONSIDERED HERE TODAY, THIS WOULD INCREASE THIS BENEFIT AGAIN BY $50.00 FOR A TOTAL MONTHLY SURVIVORS BENEFIT OF $251.00 PER MONTH.

THE OTHER GROUP OF INDIVIDUALS THAT THIS BILL AFFECTS IS PERMANENTLY AND TOTALLY DISABLED WORKERS. AGAIN AN EXAMPLE; THERE IS AN INDIVIDUAL THAT SUFFERED A SEVERE INJURY IN 1970. HE WAS RECEIVING A MONTHLY INCOME OF $995.00 PER MONTH AT THE TIME OF THE INJURY. HE HAS NO DEPENDENTS AND IS NOW PERMANENTLY AND TOTALLY DISABLED. HE RECEIVED THE MAXIMUM ALLOWED UNDER THIS CATEGORY OF $208.00 PER MONTH AND THE LEGISLATORS GRANTED A 10% INCREASE IN 1973 AND 10% IN 1975. THEREFORE, HE IS NOW RECEIVING $249.60 PER MONTH. UNDER THE LEGISLATION BEING CONSIDERED HERE TODAY, THIS WOULD INCREASE THAT BENEFIT AN ADDITIONAL $50.00 PER MONTH AND MAKE HIS PERMANENTLY TOTAL DISABILITY PENSION $299.60.

THERE HAS BEEN A GREAT DEAL OF DISCUSSION OF COSTS OF N.I.C. BILLS DURING THIS SESSION OF THE LEGISLATURE. ALTHOUGH I DO NOT CLAIM TO BE AN EXPERT ON FINANCIAL MATTERS, THE MONETARY COST OF THIS BILL IS PRETTY SIMPLE. 378 PEOPLE AT $50.00 PER MONTH EQUALS $18,900.00 PER MONTH OR $226,800. PER YEAR WHICH IS .038 PER CENT OF THE CURRENT ANNUAL PREMIUM INCOME OF THE NEVADA INDUSTRIAL COMMISSION OR LESS THAN ½ PER CENT. THIS EXPENSE WILL DECREASE EACH YEAR AS THE RECIPIENTS EXPIRE.

THESE ARE ONLY TWO EXAMPLES WHICH REPRESENT A COMMON PROBLEM FACING MANY OF OUR NEVADA RESIDENTS. IN BEHALF OF THE 213 RESIDENTS RECEIVING DEATH BENEFITS AND THE 165 RESIDENTS RECEIVING PERMANENT TOTAL DISABILITY BENEFITS, I URGE FAVORABLE CONSIDERATION OF THIS LEGISLATION.

Exhibit B

WILLIAM A. DREHER

1. Business Affiliations:

1971 up to date	President Dreher, Rogers & Associates, Inc. New York City
1966-71	Eastern Division Manager A. S. Hansen, Inc. New York City
1960-66	Principal Lybrand Ross Brothers & Montgomery (now Coopers & Lybrand) New York City

2. Professional Affiliations:

Member, American Academy of Actuaries
Fellow, Society of Actuaries
Fellow, Conference of Actuaries in Public Practice

1974 up to date	Member, Board of Directors American Academy of Actuaries
1972-73	Member, Board of Governors Society of Actuaries
1975 up to date	Member, AICPA-AAA Liaison Committee

3. Workmen's Compensation Activities

Utah State Compensation Fund - 1964

Industrial Commission of Arizona - 1967 up to date

Arizona State Compensation Fund - 1968 up to date

Nevada Industrial Commission - 1972 up to date

Dreher, Rogers & Associates, Inc.

March 11, 1977

Mr. John R. Reiser
Chairman
Nevada Industrial Commission
515 East Musser Street
Carson City, Nevada
89701

Dear Mr. Reiser:

You recently requested that we review and comment on the actuarial and statistical procedures used by the staff of the Nevada Industrial Commission in preparing fiscal notes relative to proposed legislative changes, in developing recommended changes in premium rate levels, and in determining the actuarial liabilities and incurred costs of the Nevada Industrial Commission. This letter summarizes our conclusions and opinions on these topics.

Our review focussed on the last five fiscal years, 1972 through 1976. Our firm has served the Nevada Industrial Commission as consulting actuaries since the fall of 1972 and has prepared an annual actuarial report on the financial condition of the Commission. In addition, we have assisted the staff in developing its recommendations for the current premium level in each of the fiscal years, 1973 through 1976. We have also reviewed the fiscal notes prepared for the current and the two preceding sessions of the Nevada legislature.

The quality of the actuarial work done by your staff has been consistently high. Their analyses

are soundly based upon available data, logical procedures and well-reasoned conclusions. To confirm their work, we frequently use other actuarial procedures and seldom find any material difference in results. Whenever such differences are noted, the staff is prompt to respond.

The same thorough actuarial procedures used to develop fiscal notes for proposed legislation are later used in determining the premium rate level for the coming fiscal year. The skill with which a premium rate level is chosen quickly becomes apparent through the normal operations of the Commission, since premium rates are annually matched against the incurred costs for current claims and administrative expenses.

The objective of the premium rating process is to establish a rate level that is slightly, but not excessively higher than the actual cost of claims and administrative expenses. (As you know, the Nevada Industrial Commission faces a delicate task in responding to the statutory injunction to set premium rates at the lowest practical level - so as to not unreasonably burden employers - and at the same time to see that adequate funds are accumulated - so as to assure claimants that there will always be money available to cover the legitimate cost of their benefits.)

We believe that the financial results of the Nevada Industrial Commission clearly demonstrate that this objective has been achieved. Furthermore, it is clear from a reading of the record that the actuarial estimates developed by your staff have played an important part in this process. If they had not skillfully set premium rate levels, there would either be excessive accumulation of premiums or underwriting losses, neither of which is desirable. The record for the past five years is summarized on the attached exhibit.

The underwriting results for individual years varied from a gain of 10% in 1973 to a loss of 11% in 1976. For the five years combined, there was a net underwriting gain of $1.8 million on a total of premium collection of $198,400,000. This 1% margin demonstrates that the objectives of the Commission have been achieved and that it has been well-served by the actuarial staff.

One point should be noted. In 1975 the staff estimated that it would be necessary to raise premiums by 21.5% to maintain a reasonable balance between premiums and incurred costs for fiscal year 1976. The Commission elected to keep the rate increase down to 15%, to cushion the impact of the recession on Nevada employers. We agreed with the Commission's decision, but it is clear that the 11% underwriting loss in 1976 would have been cut in half if the staff's recommendation had been followed.

Each year the actuarial reserves on claims from the past are reviewed to see if they will be adequate to cover the future benefit payments. As shown on the exhibit, these reserve adjustments have totalled $4.1 million over the last five years. This total represents approximately 3% of the total reserves at the end of fiscal year 1976. The necessary additions to the reserves have been made up out of the excess investment income on the assets of the Commission. This is one strong reason why it is necessary to use a conservative interest discount in developing the actuarial reserves.

Finally, we have reviewed in detail the fiscal notes prepared for AB115, AB116 and SB281 and are in agreement with the estimates of costs that have been submitted to the legislature.

Please let us know if further information is required.

Very truly yours,

DREHER, ROGERS & ASSOCIATES, INC.

By: William A. Dreher
William A. Dreher
Member, American Academy of Actuaries

WAD: mec

Attachment

NEVADA INDUSTRIAL COMMISSION

Rate Level Revisions				Summary of Actuarial Experience				
Staff Recommendation	NIC Action	Effective Date	Fiscal Year	Premiums	Incurred Cost (Including Expenses) (in millions)	Gain or Loss $	Gain or Loss % of Premium	Actuarial Reserve Revisions (in millions)
18%	18%	7/1/71)						
		)	1972	$ 25.3	$ 23.4	$+1.9	+ 7%	$-1.9
30	30	1/1/72)						
0	0		1973	32.8	29.6	+3.2	+10	-1.7
18	18	7/1/73	1974	43.6	40.1	+3.5	+ 8	+1.6
0	0		1975	43.1	43.8	-0.7	- 2	-0.1
21.5	15	7/1/75	1976	53.6	59.7	-6.1	-11	-2.0
TOTAL				$198.4	$196.6	$+1.8	+ 1%	$-4.1

ab 116

KAFOURY, ARMSTRONG, TURNER & CO.
A PROFESSIONAL CORPORATION
CERTIFIED PUBLIC ACCOUNTANTS

50 CALIFORNIA AVENUE
RENO, NEVADA 89502
TELEPHONE (702) 322-9471

March 22, 1977

Mr. John Reiser, Chairman
Nevada Industrial Commission
515 East Musser Street
Carson City, Nevada 89701

Re: Assembly Bill No. 116
January 20, 1977

Dear John:

We have reviewed AB 116 and NIC staff calculations used in arriving at the estimated cost of the bill.

We believe the methods used by NIC and the estimated cost of $3,221,550 to be reasonable.

Very truly yours,

Lawrence J. Helseth

Lawrence J. Helseth

LJH/sf

Summary of Active Pensions Arising From Accidents Which Occurred Prior to July 1, 1973

AB 116

Permanent Total Pensions - Accident

	Number	Life Expectancy in Months Discounted at 3 3/4% Per Annum		Value of Monthly Benefit		
Nevada Residents	204	26,760.81	x	$50	=	1,338,041
Nonresidents	61	7,579.43	x	$50	=	378,972
Widows of PT Pensioners						
Residents	6	784.27	x	$50	=	39,213
Nonresidents	3	346.30	x	$50	=	17,315
Children of PT Pensioners	1	29.56	x	$50	=	1,478
	275					

PT's Average Age - 61.4

Fatal Pensions

Widows - Nevada Residents	118	17,151.93	x	$50	=	857,596
Widows - Nonresidents	92	11,650.42	x	$50	=	582,521
	210					3,215,136

Widows' Average Age - 61.8

485 Total

In addition to the above who are specifically provided for in AB 116 amended, there are permanent total and widow pensioners whose disability or death resulted from occupational disease. Though there is no specific provision in this bill for these pensioners, a court test might force their inclusion.

Permanent Total Pensions

Nevada Resident - Silicosis	27	2,467.86	x	$50	=	123,393
Nonresidents - Silicosis	6	594.14	x	$50	=	29,707
Resident Widows - Silicosis	22	2,467.86	x	$50	=	123,393
Nonresident Widows - Silicosis	4	495.36	x	$50	=	24,768
	59					

Silicosis Average Age - 71.1

OD PT - Resident	4	557.09	x	$50	=	27,855
OD PT - Nonresidents	3	282.18	x	$50	=	14,109
OD Widow - Resident	1	148.55	x	$50	=	7,427
OD Widow - Nonresident	2	234.39	x	$50	=	11,720

1549

362,372

There are also 125 children of workers who were fatally injured who are not provided for in the bill.

Had they also received $50, there would have been an additional liability of $308,747.

Finally, there are 4 parents who were dependent on workers who were fatally injured but who would not receive $50 per month under the terms of AB 116. Had they been provided for, the additional liability would be $12,023.

E

3-30

NEVADA INDUSTRIAL COMMISSION
OFFICE OF
THE COMMISSIONERS

MEMORANDUM

TO: Senator Thomas R.C. Wilson, Chairman of Senate Committee on Commerce and Labor

FROM: John Reiser, Chairman John Reiser

SUBJECT: AB 116 - Supplemental Compensation Benefits

DATE: April 4, 1977

Commission spokesmen advised the Committee that AB 116 would finance a welfare benefit from insurance premiums.

This practice was found by the subcommittee for the study of the Nevada Industrial Commission to be one of the causes of the NIC problems - which brought about the study during 1971 and 1972. Excerpts from Bulletin No. 104 relative to the funding of retroactive benefits were read into the record of the committee hearings.

In 1973 and again in 1975, NRS 616 (NRS 616.626 and 628) was amended to provide supplemental retroactive benefits to widows, permanent total pensioners and other dependents who were residents of Nevada. In 1973, the Silicosis and Disabled Pension Fund was established by transfer from the State General Fund to the Silicosis and Disabled Pension Fund. It was intended to fully fund (i.e., lifetime of beneficiaries) the supplemental benefit.

These acts of the legislature recognized the welfare aspect of the supplemental benefit. Both the funding from the State general fund and the restriction to Nevada residents only, are recognition of the general welfare nature of the benefit.

A suit has been filed in Federal District Court claiming the restriction of supplemental benefits to Nevada residents is disciminatory and therefore unconstitutional. This suit is now in litigation.

Our defense in the suit is that the supplemental benefits are not worker's compensation benefits, but general welfare benefits and the State has the responsibility for the welfare of its residents.

If AB 116 is passed in its present form, the defenses against the suit will be weakened. Should we fail to sustain that the supplemental benefits are an item of general welfare, a future liability of approximately $791,000 would be created. This is in addition to the projected costs of AB 116. If the Judge finds that benefits are retroactive, an immediate payment to out-of-state claimants of approximately $265,000 would be required to cover the period July 1, 1973 to June 30, 1977.

The alternative to AB 116 that is consistent with legislative commission guidelines is the attached amendment to NRS 616.626 and 616.628 increasing supplemental benefits to Nevada residents by 10% (from 20% to 30%) to be paid for from the existing silicosis and disabled pension fund.

If this recommendation is adopted, the supplemental benefits of these pensioners will no longer be fully funded. At some time in the future, another administration will be required to provide supplemental funding from general revenues.

If it is assumed that the undisbursed balance of the silicosis and disability pension fund is invested and earns a 6% return, and the supplemental benefit is limited to 30%, there should be funds available for supplemental benefits for approximately eleven years.

Breakdown of Nevada residents who would receive 10% increase in benefits under proposed amendment to AB 116.

147 widows
209 permanent total pensioners
27 permanent total silicosis pensioners
66 children
1 parent

/dl

SUMMARY—— Amends NRS Chapter 616 increasing compensation and death benefits for certain claimants and dependents.

EXPLANATION: Matter underlined is new

that in [ ] is deleted

AN ACT amending NRS Chapter 616 increasing retroactive total disability benefits and death benefits for certain claimants and dependents.

SECTION 1: NRS 616.626 is hereby amended to read as follows:

616.626 Increased total disability benefits if disability incurred prior to April 9, 1971. Any claimant or his dependents, residing in this state, who receive compensation for permanent total disability on account of an industrial injury or disablement due to occupational disease occurring prior to April 9, 1971, is entitled to a [20 percent] 30 percent increase in such compensation, without regard to any wage limitation imposed by this chapter on the amount of such compensation. The increase shall be paid from the silicosis and disabled pension fund in the state treasury.

SECTION 2: NRS 616.628 is hereby amended to read as follows:

616.628 Increased death benefits if death occurred prior to July 1, 1973. Any widow, widower, surviving children or surviving dependent parent or parents, residing in this state, who receive death benefits on account of an industrial injury or disablement due to occupational disease occurring prior to July 1, 1973, is entitled to a [20 percent] 30 percent increase in such benefits without regard to any wage limitation imposed by this chapter on the amount of such benefits. The increase shall be paid from the silicosis and disabled pension fund in the state treasury.

IF AMENDED TO PROVIDE 10% INCREASE

FISCAL NOTE

BDR
A.B. 116
S.B.

Transmitted April 1, 1977

Proposed Amendment

STATE AGENCY ESTIMATES

Date Prepared April 1, 1977

Agency Submitting Nevada Industrial Commission

Revenue and/or Expense Items	Fiscal Note 1976-77	Fiscal Note 1977-78	Fiscal Note 1978-79	Continuing
		106,000	106,000	106,000
Total				

Explanation (Use Continuation Sheets If Required)

450 Nevada residents would receive a 10 percent increase in permanent total or survivor benefits effective July 1, 1977. Total annual disbursements from the silicosis and disabled pension fund during fiscal 1978 and fiscal 1979 would amount to approximately $386,000. This amount includes the $106,000 annual increase provided in the bill.

The balance in the fund at January 31, 1977 was $3,156,982.

Local Government Impact YES ☐ NO ☐
(Attach Explanation)

Signature John R. Reiser

John R. Reiser

Title Chairman

DEPARTMENT OF ADMINISTRATION COMMENTS

Date

Signature

Title

LOCAL GOVERNMENT FISCAL IMPACT
(Legislative Counsel Bureau Use Only)

Date

Breakdown of Nevada residents who would receive 10% increase in benefits under proposed amendment to AB 116.

147	widows
209	permanent total pensioners
27	permanent total silicosis pensioners
66	children
1	parent

TRANSCRIBED BY WORD PROCESSING CENTER
NEVADA INDUSTRIAL COMMISSION
DICTATE: 885-5264, 885-5265
Question: 885-5291

1635

WPC

March 16, 1977

Ernest W. Mack, M.D.
505 South Arlington Avenue
Reno, NV 89509

Re: Claimant: Emery J. Castle

Attn: L.R. Zimmerman, Claims Examiner

REPORT

Mr. Castle, as his record will show, has been on treatment by us now for a considerable time because of an injury to the cervical region, and he has been treated first with foraminotomies, posteriorly, which failed to bring about relief of his symptoms. Because of the continuing disability, he was subjected to disc removal at both the C5-6 and the C6-7 levels. This operation consisted of removal of the disc and removal of spurs. Follow-up studies have demonstrated that there is evidence that he is undergoing some fusion at these levels where the disc was totally removed and that probably he will ultimately fuse these joints, at which time he may, then get some relief of pain.

Presently, he continues to require medication for relief of pain. He uses a collar intermittently at my direction, in fact, uses it most of the time, and I would feel that he is, at the present time, totally disabled with regard to any kind of work. Even minimal things such as doing limited things around the house have resulted in severe exacerbation of the pain, and I think, at the present time, his neck is unstable. I think with continued passage of time and with development of either a fibrous union or a bony union, such as will take place at these two levels where the disc was totally removed, he perhaps will progress then to where he will have sufficient relief of symptoms so that he can be more active. I would consider him, however, at this point, to be totally disabled. The affected period of disability, while it may be permanent, certainly will not reach a rateable condition for at least another period of six months.

ERNEST W. MACK, M.D.

EWM:jt2830

D: 3/14/77
T: 3/15/77

It was stipulated at the time, that a final decision would be held in abeyance until such time as our Medical Advisor, William J. Champion, M.D., could discuss this verbally with Ernest Mack, M.D.

March 16, 1977, William Champion, M.D., did discuss Mr. Castle's continued treatment with Ernest Mack, M.D. It is reported Ernest Mack, M.D., stated that Mr. Castle's condition was stable with no plans for further treatment, and that he could be rated at this time.

CONCLUSION

Following a thorough review of the medical information provided the Nevada Industrial Commission and the assessment of our Medical Advisor, William J. Champion, M.D., the following decision is rendered.

DECISION

Mr. Castle has an 18 percent permanent partial anatomical impairment of the whole man for a cervical impairment according to the American Medical Association Guides to the Evaluation of Permanent Impairment. Mr. Castle is entitled to Permanent Partial Disability Benefits under NRS 616.605 at the rate of $785.64 per year until age 65.

It is the further decision that Mr. Castle be given consideration by the Industrial Rehabilitation Department if he requests services within thirty (30) days from the date of this hearing.

If the claimant is aggrieved by the foregoing decision, he may appeal the decision to the Commission by requesting and filing the Basis for Appeal form within thirty (30) days from the date hereof.

Dated this 23rd day of March, 1977.

Claims Department
NEVADA INDUSTRIAL COMMISSION

By: Les Harwell
Les Harwell, Hearings Examiner

cc: Lindell's Painting Service
John T. Coffin, Esq.

F-1

MIKE O'CALLAGHAN
GOVERNOR

STATE OF NEVADA

NEVADA INDUSTRIAL COMMISSION

JOHN R. REISER
CHAIRMAN

CLAUDE EVANS
COMMISSIONER REPRESENTING LABOR

JAMES S. LORIGAN
COMMISSIONER REPRESENTING INDUSTRY

ADDRESS ALL CORRESPONDENCE TO
NEVADA INDUSTRIAL COMMISSION

REPLY TO

515 East Musser Street
Carson City, Nevada 89714
March 23, 1977

Mr. Emery J. Castle
9600 Lemmon Drive
Lemmon Valley, NV 89508

Re: Claim No: 75-17318
Injured: 11-13-74

Dear Mr. Castle:

Enclosed you will find the decision which was recently rendered by the Claims Department regarding your claim. You will also find a copy of the Request for Review to the Commission in the event that you do not concur with this decision.

Should you have questions concerning this matter, please feel free to contact me.

Very truly yours,

L.R. Zimmerman
Claims Examiner

LZ:18kt1419

Enclosures

cc: Lindell's Painting Service
John T. Coffin, Esq.

BEFORE THE NEVADA INDUSTRIAL COMMISSION

IN THE MATTER OF THE CLAIM OF EMERY J. CASTLE 9600 Lemmon Drive Lemmon Valley, NV 89508	CLAIM NO: 75-17318 D. O. A.: 11-13-74 EMPLOYER: Lindell's Painting Service P.O. Box 7483 Reno, NV 89510

CLAIMS DEPARTMENT HEARING

A Claims Department Hearing was conducted in Carson City, Nevada, on March 15, 1977, pursuant to the Rules and Regulations Governing the Practice and Procedures Before the Nevada Industrial Commission. The claimant, Emery J. Castle, was present at the hearing in proper person and was represented by counsel, John T. Coffin, Esq., who was also present at the hearing. Also present was the claimant's wife, Mrs. Castle. Representing the Claims Department for the Nevada Industrial Commission were: Hearings Examiner, Les Harwell; Claims Examiner, L.R. Zimmerman; Medical Advisor, William J. Champion, M.D., and Rehabilitation Representative, Jan Larsen.

DISCUSSION

Mr. Castle did sustain an injury on November 13, 1974, while employed as a vinyl hanger for Lindell's Painting Service. Mr. Castle stated he threw a heavy roll of vinyl onto his shoulder and his neck popped.

Mr. Castle did not report the accident to the Nevada Industrial Commission until November 18, 1975. The Commission accepted the claim in a Commission Hearing conducted July 19, 1976.

January 23, 1975, Mr. Castle was seen by Fred M. Anderson, M.D., who reported, "Mr. Castle has been a patient since 1963." January 10, 1975, because of complaints of headaches he was referred to David Dapra, M.D. Mr. Castle was seen by various consulting physicians and March 21, 1975, Ernest Mack, M.D., performed a partial hemilaminectomy at C5-6, foraminotomy and decompression of C6. June 23, 1975, Ernest Mack, M.D., performed a partial hemilaminectomy and foraminotomy with decompression of nerve root C5. January 20, 1976, Ernest Mack, M.D., operated for a protruded disc and anterior cervical discectomy C5-6, with removal of spurs. September 17, 1976, Mr. Castle was seen for a CIW by Gregory Bard, M.D., and associates. Ernest W. Mack, M.D., remained the treating physician.

Temporary Total Disability Compensation was paid at the biweekly rate of $220.16. At the time of injury, Mr. Castle was 53 years of age, earning $1,520.00 per month.

Mr. Castle is being seen at this time for discussion of his claim and medical evaluation. He is represented by counsel John T. Coffin, Esq.

Mr. Coffin requested at the hearing that Mr. Castle's claim be carried on in reference to the last medical report from Ernest W. Mack, M.D., of January 17, 1977.

March 14, 1977

Senator Thomas R. C. Wilson
Chairman of the Committee on
Commerce and Labor
Legislative Building
Carson City, Nevada 89710

Dear Senator Wilson:

You have requested my opinion concerning the amendment of NRS 616.505 by Assembly Bill No. 115, whether the new criteria for determining disability inserted in subsection 3 would be applied to persons disabled before July 1, 1977, when A.B. 115 would become effective if enacted. The answer requires an interpretation of the amendment to subsection 8, quoted below:

> 8. [The increase in compensation and benefits effected by the amendment of this section shall not be retroactive.] The compensation and benefits provided by this section are fixed as of the date of the injury and are not affected by any subsequent amendment of this section.

The language bracketed was first inserted in the law by section 5, chapter 233, Statutes of Nevada 1971. At that time, subsection 1 was amended to increase the minimum and maximum dollar amounts payable on account of certain disabilities. It was retained in 1973 when the dollar amounts were removed altogether. In A.B. 115, where the substantive changes do not relate to dollar amounts, the language of subsection 8 was changed to make clear that its effect is only to retain the respective dollar limits which prevailed before 1971 and between 1971 and 1973.

Therefore, the new criteria of A.B. 115 as drafted would be applied to disabilities incurred before as well as on and after July 1, 1977. The fiscal note was prepared on this basis. If it is desired to have the new criteria apply only on and after July 1, 1977, this can be accomplished by amending the bill.

Very truly yours,

Frank W. Daykin
Legislative Counsel

FWD:jll

MEMORANDUM TO: THE COMMISSION

FROM: RILEY M. BECKETT, General Counsel

SUBJECT: A.B. 115

DATE: MARCH 4, 1977

This is in response to your request for an opinion as to A.B. 115 (NRS 616.605(8) affecting the retroactivity of said bill. The existing law provides that any "increase in compensation and benefits affected by the amendment of this section shall not be retroactive." A.B. 115 deletes this provision and provides that "the compensation and benefits provided by this section are fixed as of the date of the injury and are not affected by any subsequent amendment to this section." It is apparent by this law that the introducer of this bill specifically had deleted the existing law providing for no retroactivity.

NRS 616.625 provides that the amount of any compensation and benefits are to be determined as of the date of the accident or injury, and the rights thereto shall be fixed as of such date. A.B. 115 specifically deletes section 3 of NRS 616.605 providing that "no other factors shall be considered" in PPD entitlement and provides that "other factors" comprise of four elements shall be determined in the percentage of PPD awarded. NRS 616.605 as it existed previous to July 1, 1973 provided in essence for the same thing as proposed by this bill, that being "consideration shall be given among other things, to any previous disability, the occupation of the injured employee, the nature of the physical injury, the age of the employee at the time of the injury." Thus, by NRS 616.625, as well as the proposed amendment to NRS 616.605(8), the NIC would be bound to consider these "other factors" as of the date of the injury to the claimant.

It is my opinion based on a complete review of this bill and the NIIA, that the "other factors" aspect of this bill has retroactive application for all injuries occurring subsequent to June 30, 1973.

Riley M. Beckett

RILEY M. BECKETT

RMB:ss

Nevada Industrial Commission
Form G2L

INTEROFFICE MEMORANDUM

TO: NEVADA INDUSTRIAL COMMISSION, ATT; JOHN R. REISER CHAIRMAN
ACCOUNT NO.

FROM: WM. J. CROWELL - LEGAL ADVISOR
CLAIM NO.

SUBJECT: AB 115
DATE: MARCH 2nd, 1977

MEMO TO NEVADA INDUSTRIAL COMMISSION

Pursuant to your request I have reviewed AB 115 with particular reference to Section 8 beginning with line 50 on page -2- with the particular amending language as follows:

> "The compensation and benefits provided by this section are fixed as of the date of the injury and are not affected by any subsequent amendment of this section."

In my opinion the amending language cited will create a retroactive application to compensation claimants in effect after July 1, 1973 through and including 1974, 1975, 1976, 1977 and hereafter. The language is not sufficiently specific to restrict the provisions of the Act to only such claims as come into being after the effective date of the legislation which would be July 1, 1977.

Respectfully submitted,

Wm J. Crowell

WJC/mh

Contents

PPD Compensation Development

	Year End Status Percent PPD Determined
Claim Year	5 - 10%
1st Year Following Claim Year	30 - 35%
2nd Year Following Claim Year	60 - 70%
3rd Year Following Claim Year	85 - 90%
4th Year Following Claim Year	94 - 96%
5th Through 7th Year	1 - 2% Per Year

1565

1969 PPD Experience
Thru 6/30/76

PPD Awarded	$2,242,216
Estimated Discount to Present Value	.92
Present Value	$2,062,838

1566

Lost Time Claims

FY 1969	-	4,094
FY 1976	-	8,800

$$\text{Ratio} = \frac{\text{FY 1976}}{\text{FY 1969}} \quad \frac{8,800}{4,094} = 2.15$$

Maximum PPD Benefit
10% Disability

FY 1969	-	$2,860	
FY 1976	-	$12,513	(age 38 yrs.)

$$\text{Ratio } \frac{\text{FY 1976}}{\text{FY 1969}} = \frac{\$12,513}{\$2,860} = 4.375$$

Average PPD Benefit
10% Disability

FY 1969	-	$2,154	
FY 1976	-	$8,126	(age 38 yrs.)

$$\text{Ratio } \frac{\text{FY 1976}}{\text{FY 1969}} = \frac{\$8,126}{\$2,154} = 3.773$$

1568

1969 PPD Experience Restated to 1976 Conditions

Maximum Benefit

1969 PPD Present Value			$2,062,838
No. of Claims Ratio	(1976)/(1969)	8,800 claims / 4,094 claims	x 2.15
			$4,435,101
Benefit Level Ratio	(1976)/(1969)	$12,513 / $ 2,860	x 4.375
			$19,403,569

Average Benefit

1969 PPD Present Value			$2,062,838
No. of Claims Ratio	(1976)/(1969)	See above	x 2.15
			$4,435,101
Benefit Level Ratio	(1976)/(1969)	8,126 / 2,154	x 3.773
			$16,733,636

1569

Comparison

NIC 1976 - PPD Incurred	$13,288,000
FY 1969 - PPD Restated to 1976 Conditions - Average Benefit	$16,733,636
FY 1969 - PPD Restated to 1969 Conditions - Maximum Benefit	$19,403,569

1570

1970 PPD Experience Restated to 1976 Conditions

Maximum Benefit

PPD Awarded	$2,831,555
Present Value Discount	x .92
Present Value	$2,605,030
No. of L.T. Claims Ratio $\frac{1976}{1970} = \frac{8,800}{4,916}$	1.79
	$4,663,003
Maximum Benefit Ratio $\frac{12,513}{2,860}$	4.375
1970 PPD Restated Based on Maximum Benefit	$20,400,638

Average Benefit

Estimated Present Value 1970 PPD Awarded	$2,605,030
No. of L.T. Claims Ratio	x 1.79
	$4,663,003
Average Benefit Ratio $\frac{8,126}{2,696}$ =	3.01
1970 PPD Restated Based on Average Benefit Levels	$14,054,757

(1976 PPD Estimate - $13,288,000.)

1571

1971 PPD Experience Restated to 1976 Conditions

Maximum Benefit

PPD Awarded	$3,334,731
Present Value Discount	x .92
Present Value	$3,067,952
No. of L.T. Claims Ratio $\frac{1976}{1971} = \frac{8,800}{5,083} =$	1.73
	$5,307,557
Maximum Benefit Ratio $= \frac{12,517}{2,860} =$	4.375
1971 PPD Restated Based on Maximum Benefit Levels	$23,220,565

Average Benefit

Present Value PPD Awarded	$3,067,952
No. of L.T. Claims Ratio	x 1.73
	$5,307,557
Average Benefit Ratio $\frac{8,126}{2,716} =$	2.99
1971 PPD Restated Based on Average Benefit Levels	$15,869,595

1572

1972 PPD Experience Restated to 1976 Conditions

Maximum Benefit

PPD Awarded*		$3,696,350
Present Value Discount		x 92
Present Value		$3,400,642
No. of L.T. Claims Ratio	$\frac{1976}{1972} = \frac{8,800}{5,697} =$	x 1.54
		$5,236,988
Maximum Benefit Ratio	$\frac{12,517}{4,004} =$	3.13
1972 PPD Restated at Maximum Benefit Levels		$16,391,772

Average Benefit

Present Value PPD Awarded		$3,400,642
No. of L.T. Claims Ratio		x 1.54
		$5,236,988
Average Benefit Ratio	$\frac{8,126}{3,523} =$	2.31
		$12,097,842

*Note: On June 30, 1976, NIC estimated that there would be $335,910 in PPD awarded on FY 1972 claims - 8.3% of the original estimate. All restatements are approximately 8% under expectations.

1573

PPD Benefits Per Degree of Disability

Fiscal Year	Maximum	Minimum	Average
1969	$200	$60	$150.65
1970	200	60	188.54
1971	200	60	189.93
1972	280	84	246.41

"Other factors" were added to the disability award. The other factors amounted to 43 percent of the disability.

1976	$ 6 per month	- -	3.8965 per month

Calculation of Present Value - FY 1976
Maximum PPD Compensation on 10% Disability

Average Age Lost Time Claimant, FY 1976	35.8 Years
Average Age At Award	38 Years

Maximum Compensation

Wage x .005 = Monthly payment per degree of disability.

$1,200 x .005 = $6.00 per month per degree of disability.

$6.00 x 10% disability = $60 per month.

$720 per year.

Annuity Factor
Age 38 - payments to 65 yrs. 17.3798
(3 3/4% interest assumption)

$12,513

Calculation of Present Value - FY 1976
Average PPD Compensation on 10% Disability

$779.30 x .005 = $3.8965 per month per degree of disability.

$3.8965 x 10% = $38.965 per month

x 12

$467.58 per year

Annuity factor 17.3798

Present Value of Average 10% Disablement, FY 1976 - $8,126.45

1575

Calculation of Maximum Compensation FY 1969, 1970, 1971

Maximum Compensation (NRS 616.590 and 605)	$200	per percentage of disability
Assume 10 percent impairment	10	
Compensation for impairment	$2,000	
Average "other factors"	43%	
Compensation for "other factors"	$ 860	
Total Compensation	$2,860	

1576

Calculation of Average Compensation For 10% Disablement

FY 1969 - Average Compensation For -

1% Disablement

10% Disablement

Fiscal Year	Comp Per 1% of Impairment	x	Degree of Disability	=	Comp For Disability	x	Average Other Factor Percentage	=	Comp For Other Factors	Total Comp 10% Dis-ability
1969	$150.65	x	10	=	$1,506.50	x	.43	=	$647.80	$2,154.30
1970	$188.54	x	10	=	$1,885.40	x	.43	=	$810.72	$2,696.12
1971	$189.93	x	10	=	$1,899.30	x	.43	=	$816.70	$2,716.00
1972	$246.41	x	10	=	$2,464.10	x	.43	=	$1,059.56	$3,523.66

Wage Distribution
NIC 1969 Claims

Wage	No. of Claims	Percent of Total
0 - 399	1,248	30.5%
400 - 599	1,202	29.4%
600 - 799	844	20.6%
800 - 999	453	11.1%
1,000 - 1,199	202	4.9%
1,200 - Over	143	3.5%
		100.0

Wage Distribution
NIC 1972 Claims

Wage	No. of Claims	Percent of Total
0 - 399	1,090	19.1%
400 - 560	1,565	27.5%
561 - 799	1,357	23.7%
800 - 999	790	13.9%
1,000 - 1,199	448	7.9%
1,200 - Over	447	7.9%
		100.0%

Wage Distribution
NIC 1976 Claims

Wage	No. of Claims	Percent of Total
0 - 399	661	7.5%
400 - 599	2,178	24.8%
600 - 799	2,234	25.5%
800 - 999	1,217	13.9%
1,000 - 1,199	922	10.5%
1,200 - Over	1,562	17.8%
		100.0%

10.030 Continuing review.

1. Accepted and approved claims shall remain active and subject to continuing review during the duration of the disability.

2. Any person receiving benefits or compensation may be required by the commission to submit to medical examination from time to time for determination of the current status of the disability. Such examination shall be made in accordance with regulation 10.020. Refusal to submit to or cooperate in any such examination will result in suspension of benefits until such examination has taken place.

10.040 Permanent partial disability awards. Installment payments of permanent partial awards shall, if authorized, commence following the termination of temporary total disability compensation without prejudice to any further administrative or judicial review.

10.050 Lump sum payment of permanent partial disability awards. An injured worker has the right to elect a lump sum award on each new claim which results in an additional disablement of 12 percent or less except under the following conditions:

1. The worker is already receiving installment payments of permanent partial disability compensation arising out of another claim which involved disablement in excess of 12 percent. The previously disabled worker's monthly installment payments will be increased by an increment equal to the additional disablement on the new claim.

2. The worker is involved in a second disabling accident before an award has been made on an earlier disabling accident. If there is no factual measurement of the disablement attributable to the first injury prior to the disablement as a result of the second accident, the total disablement from both accidents will be evaluated when stabilization is reached following the second accident. If the combined total disablement exceeds 12 percent, the worker is ineligible for a lump sum award.

10.051 Lump sum payment of permanent partial disability awards—reopened claim.

1. A disabled worker may elect to receive a lump sum award on a reopened claim if the total disablement attributable to the claim—determined by adding all permanent partial awards for disablement prior to reopening, plus any additional award after reopening—amounts to 12 percent or less.

2. If the total disablement attributable to a claim is upgraded to a disability of greater than 12 percent following reopening, and an earlier lump sum award has been paid to the claimant, the previously paid lump sum award will be offset from the date of the original award, through the date of reopening at the monthly rate applicable to the original disablement award. Any lump sum balance not offset prior to reopening date, will be offset at a monthly rate applicable to the degree of disablement after reopening.

Installment payments at the revised disablement monthly rate will begin following the date on which the original lump sum award is fully offset, but in no event earlier than the date of claim reopening.

10.052 Lump sum payment of permanent partial disability awards—adjustments. When a disablement of 12 percent or less for which a lump sum award was elected and paid is reevaluated as a disablement in excess of 12 percent, as a result of appeal or correction of error, the lump sum award will be offset from the date of the original award at the monthly rate of compensation applicable to the reevaluated degree of disablement. Monthly compensation payments to the claimant will commence when the original lump sum award is totally offset at the effective monthly rate.

10.055 Election of permanent partial disability lump sum award. Claimants electing lump sum payment of permanent partial disability compensation will make the election in writing, on forms provided by the commission.

10.060 Payment of permanent partial disability lump sum award.

1. Payment of permanent partial disability lump sum awards are authorized only upon execution of a release signed by the claimant.
2. The payment of a permanent partial disability lump sum award effectively terminates the claimant's entitlement to all worker's compensation benefits, except reopening rights, associated with the claim.

(Adopted 1973, Revised 1975)

REGULATION 11

APPLICATION FOR INCREASE OR REARRANGEMENT OF COMPENSATION

11.010 Filing of application. If change of circumstances warrants an increase or rearrangement of compensation, application shall be made therefor. The application shall be accompanied by the certificate of a physician, showing a change of circumstances which would warrant an increase or rearrangement of compensation. No increase or rearrangement shall be operative for any period prior to application therefor.

11.020 Processing of application. Applications for increase or rearrangement of compensation shall be processed in the same manner as other claims, as provided for in these regulations.

11.030 Limitation. No application shall be valid or claim thereunder enforceable unless filed within 1 year after the day upon which the injury occurred or the rights thereto accrued.

(Adopted 1973)

Nevada Industrial Commission
Form G2L

INTEROFFICE MEMORANDUM

TO SENATOR THOMAS WILSON, CHAIRMAN, SENATE COMMITTEE ON COMMERCE AND LABOR

ACCOUNT NO.

FROM JOHN REISER, CHAIRMAN, NIC John Reiser

CLAIM NO.

SUBJECT SUBMISSION OF MATERIAL REQUESTED BY THE COMMITTEE DURING MARCH 30 HEARING

DATE APRIL 1, 1977

The following are submitted in response to your request.

1. Supporting detail for fiscal note on AB 115.
2. Loss experience for Kennecott Copper, July 1, 1965 - June 30, 1976.
3. Investment income and annual rate of return on investments - fiscal 1972 - 1976.
4. Consultations by the "Bard Group" and Dr. Chester Powell during calendar 1976.
5. Loss experience and rates for Resort Hotel Industry, July 1, 1965 - July 1, 1975.
6. Response to Senator Ashworth's questions regarding the percentage of increase to rate levels.

If we have overlooked anything, or if there is any additional information required, please advise.

JRR/RSH/dkc

1583

Supporting Detail For Fiscal Note on AB 115

The annual rate of increase in disabling compensable claims from 1969 through 1976 was 11.6%. 4,092 claims were handled in 1969; 8,800 in 1976.

The average monthly wage has increased from $688.60 in FY 1974 to $807.37 in fiscal 1977. This represents a rate of annual increase of 5.5% per annum.

In projecting the cost of PPD in FY 1978, the above rates of increase are applied to FY 1976 PPD cost.

1976 PPD	-	$13,288,000
1978 Projection - No change in Statute	-	$18,420,140

The addition of other factors will result in a 43.1% increase in the cost of PPD. This data is derived from an actual claim by claim analysis of FY 1970, 1971 and 1972 settlements when other factors were considered in arriving at degree of compensable disability.

$18,420,140 x 1.431 = $26,359,220

The additional cost for other factors = $7,939,080

The extension of benefits from age 65 (or 5 years) to claimant lifetime will result in an 18.9% increase in the overall cost of PPD. This forecast is based on an average life span of 72 years. The figures are derived from a claim by claim analysis of a representative sample (573) of settled claims.

$26,359,220 x 1.189 = $31,341,112

The additional cost for extension of duration of benefits = $4,981,892.

The payment of a lump sum balance to surviving dependents of a claimant who dies within 5 years of the date of his injury as a result of nonindustrial causes will add $148,000 to the cost of PPD for fiscal 1978.

Calculation of added cost for lump sum payment to widows

At this point there are seven 1974 PPD's which have terminated because of death and seven 1975 PPD's which have terminated because of death - respective rates of 2.33 per year and 3.5 per year. When these annual rates are equated to the lost time claims for each year the result is rates of .00033 and .00048 per claim per year - an average of .0004 per claim per year.

FY 1978 lost time claims are projected as $8,800 \times (1.116)^2 = 10,960$.

10,960 x .0004 x 5 years = 21.92 = 22

The average cost of a PPD award in 1976 $\frac{13,288,000}{8800 \times .25}$ = 6,040

FY 1978 = 6,040 x 1.055 x 1.055 = 6,723

6,723 x 22 = 147,906 = $148,000

1584

Administration - 1978 Claims

The added cost of administration arising from the additional litigation which could be expected, plus the stretchout in the period of eligibility, would amount to at least 10 percent of the added benefit cost.

$1,307,000

Retroactive Application

The fixing of "the compensation and benefits provided by this section as of the date of the injury" and the removal of the provision that amendments to the section shall not be retroactive, opens the application of this section to FY 1974, 1975, 1976 and 1977 claims.

The additional cost of PPD is determined as follows:

FY 1974	PPD Expense	$8,020,033
FY 1975	PPD Expense	9,013,837
FY 1976	PPD Expense	13,288,000
FY 1977	PPD Expense (Projected)	15,645,025
		$45,966,895

$45,966,895 x 1.431 x 1.189 = $78,210,787

$78,210,787 - 45,966,895 = $32,243,892

Should the retroactivity feature of the bill apply, the administrative cost of reevaluation of disability would be enormous - amounting to at least 10 percent of the added cost.

$32,243,892 x 1.10 = $35,468,281

Administrative Expense Retroactive $3,224,000

Calculation of Local Government Impact of AB 115

The average annual losses for the period 1970-1974 for classes 6100 and 6200 were calculated. The average produced a figure which should represent the midpoint (1972) average loss. This figure is increased by 6%, six times to produce a projected loss for fiscal 1978. (The six percent is a conservative estimate of the annual rate of increase in claim costs.)

24.1% of the total costs represent PPD expenses under existing statutes.

AB 115 would cause an 87.16% increase in cost of PPD (1.431 x 1.189 x 1.10).

The same process was followed with class 6300 to develop the additional cost to schools and university systems.

Data Requested by Senate Committee on Commerce and Labor

Loss Experience and Rates Charged to Kennecott Copper Corporation
For The Period July 1, 1965 - June 30, 1976

Fiscal Year	Payroll	Premium	Incurred Losses	*Loss Ratio %	Premium Rate
1966	$9,984,755	$75,960	$74,716	98.4	.87 .82
1967	10,467,699	77,163	58,298	75.6	.82 .80
1968	5,478,717	40,261	17,081	42.4	.80 .83
1969	11,406,849	83,307	159,380	191.3	.83
1970	12,671,221	92,054	62,795	68.2	.83 .87
1971	13,557,704	102,598	333,540	325.1	.88 .87
1972	13,994,259	158,792	185,240	116.7	1.04 1.45
1973	15,212,106	210,939	484,491	229.7	1.45
1974	17,912,481	519,776	644,302	124.0	3.09
1975	18,672,417	532,199	436,428	81.3	3.29
1976	14,663,063	438,431	Not yet matured	?	3.43
1977					6.13

*Loss ratio = $\frac{\text{losses}}{\text{premium}}$

NIC Interpretation of the Above Data

Prior to 1971, Kennecott's loss experience was relatively stable. Beginning in 1971, there was a mushrooming of losses from industrial accidents and occupational disease. Premium rates lag behind experience by at least two years, e.g. 1971 loss experience was first reflected in rates which became effective July 1, 1973 - these rates were applicable to payroll earned during fiscal 1974. The combination of loss experience and increased benefit levels caused Kennecott's rate to more than double at the beginning of FY 1974, from $1.45 to $3.09. It has continued to rise because of the continued poor loss experience. On July 1, 1976 it was raised to $6.13 from $3.43 the previous year.

Should Kennecott bring its losses under control, the resultant decrease in rate will lag the reduction in losses, just as rate increases followed as losses increased.

On the other hand, if losses continue to outstep premium, the rate will continue to climb. From fiscal 1971 to fiscal 1977, the rate has increased by 697 percent.

The following information is provided in response to the request of the Senate Committee on Commerce and Labor during a hearing on AB 115 on March 30, 1977.

The following is the investment income record of the NIC during the past five fiscal years, 1972 - 1976.

Fiscal Year	Investment Income	Rate of Return on Investment
1972	$1,816,351	5.05%
1973	2,062,673	4.39%
1974	3,142,243	4.91%
1975	4,937,375	6.00%
1976	7,368,776	7.36%

The following information is submitted in response to the Senate Committee on Commerce and Labor request made during a hearing on AB 115 on March 30, 1977.

Payments made during the period 1/1/76 - 12/31/76 to physicians commonly referred to as the "Bard Group", University of California Hospital, San Francisco. Patients are referred to this group for an integrated work up when local treating physicians are unable to resolve apparently persistent medical problems.

Physician	Number of Consultations	Total Fees Paid by NIC
Dr. Gregory Bard - Physiatrist	43	$6,450
Dr. Carroll M. Brodsky - Psychiatrist	52	7,900
Dr. Ernest Bates - Neurosurgeon	43	6,450
Dr. E. Trent Andrews - Orthopedic	26	3,900
		$24,700

Some NIC claimants who have persistent medical problems which local treating physicians are unable to alleviate are referred to Dr. Chester Powell, an orthopedic specialist in Salt Lake City. Dr. Powell also treats patients who are referred to him and performs surgery.

Dr. Chester Powell	69	$4,202

It is common practice for treating physicians to refer some of their more difficult cases to other physicians for consultation.

During 1976, NIC was billed for a total of 6,294 consultations. The total paid for this phase of medical care was $408,558.

Loss Experience and Rate Increase for the Resort Hotel/Casino Industry

Senator Ashworth questioned the amount of rate increases that NIC has levied in the past 5 years.

When we speak of a rate level increase of 15%, we mean that NIC must realize a total increase in premium income during a fiscal year of 15%.

There may be only a few classifications for which the rate change equals 15%.

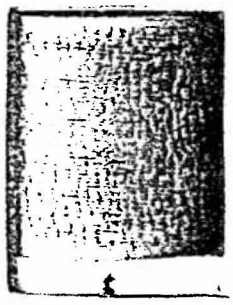
If there were no need for increased revenues when rates were calculated, the rates for some classifications would increase while the rates for others would decline. These changes would be based entirely on the loss experience for each classification during the rating period. When an overall 15% rate level change is required as when increased benefits are legislated, the 15% is overlayed on the experience change for each classification.

The final rate for any particular classification embodies the experience change plus the rate level change.

A classification which has unfavorable experience receives a magnified rate increase.

The hotel, entertainment, restaurant, bar and gaming classifications have developed unfavorable loss experience over the past 5 years. Data on the following pages illustrate the situation for three of those groups.

Rate increases have failed to match the increasing frequency and cost of injuries in the resort hotel business. Each rate increase based on past experience has been offset by an increase in accident frequency and cost.



Classification 9001 - Hotels

Fiscal Year	Payroll in Thousands	Premium	Losses	Loss Ratio	Rate
1966	$19,081	$224,240	$172,264	76.8	
1967	22,377	260,245	250,209	96.1	
1968	26,091	319,011	383,293	120.2	$1.39
1969	29,037	380,469	467,442	122.9	1.35
1970	42,377	604,819	645,430	106.7	1.62
1971	52,018	870,383	968,396	111.3	1.99
1972	57,183	1,283,353	827,120	64.4	2.13
1973	62,378	1,637,587	2,105,390	128.6	2.84
1974	74,309	2,260,707	2,922,050	129.3	3.21
1975	88,107	2,193,856	2,880,617	131.3	2.79
1976					3.87
1977					5.08

Classification 9317 - Restaurants

1966	$56,618	$629,742	$630,959	100.2	
1967	62,742	679,933	775,846	114.1	
1968	69,565	747,662	958,104	128.1	1.17
1969	75,144	853,668	1,082,789	126.8	1.16
1970	88,288	1,084,863	1,455,544	134.2	1.38
1971	95,836	1,378,122	1,707,394	123.9	1.65
1972	104,966	2,032,866	2,172,440	106.9	1.79
1973	117,431	2,641,090	2,775,443	105.1	2.38
1974	135,059	4,035,906	3,360,096	83.3	3.12
1975	154,773	4,327,087	4,183,387	96.8	3.10
1976					3.75
1977					3.69

Classification 9601 - Gaming

Fiscal Year	Payroll in Thousands	Premium	Losses	Loss Ratio	Rate
1966	$103,643	$248,922	$211,850	85.1	$
1967	109,036	257,407	281,520	109.4	
1968	118,288	288,582	329,364	114.1	.26
1969	127,087	319,352	424;334	132.9	.26
1970	144,192	395,197	366,460	92.7	.31
1971	150,482	499,029	492,445	98.7	.40
1972	166,884	800,609	722,279	90.2	.47
1973	184,809	1,010,163	1,193,780	118.2	.60
1974	212,460	1,166,028	1,039,626	89.2	.58
1975	238,348	1,521,441	1,387,999	91.2	.62
1976					.73
1977					.87

I

Senators, ladies and gentlemen, I want to thank you for giving me this opportunity to speak to you. I'm not accustomed to making speeches. I was told that in order to lobby effectively, I should speak about the laws with authority, and not about an individual case. But I am most familiar with our own situation, and I'm sure there are thousands like us in Nevada. I am speaking today for my husband, who does not speak English well enough to address you, but his problem concerns both of us and our family.

My name is Marilyn Boussaid, and I will be talking about my husband's accident.

An accident can happen to anyone. It can happen the first day of work, or after ten or twenty years. The worst is for someone hurt early on in a job. How can someone hurt in their first month of work, for example, who isn't entitled to Social Security, unemployment, welfare, or any other help, and who has a family to support, expect to survive on $450 a month for the two or three years that he is under Doctor's care, when he was earning over $1000 a month before?

We were living in Incline where my husband was earning between $900 and $1300 amonth. When he got hurt on the job, we had to wait 6 months for the NIC to accept the claim. During this time, we had no income. We had to move to Sparks, where we rented the cheapest place we could find. There was no refrigerator and no bed to sleep on. We lost our car because we couldn't keep up the payments or the insurance. The baby got sick with the flu from the draft from broken windows, and spent two weeks in the hospital on intravenous. I think this ended up costing the government more than they would have spent on us otherwise. Nobody came out ahead but the hospital. We were lucky at any rate to have the SAMI card then, because a worker can't afford to pay for private insurance.

But when you finally start receiving compensation, however little, from NIC, then if one of the family gets sick, you can't even afford to see a doctor or dentist. You can't get a SAMI card any more, or go to the Clinic, because you are considered to have too much income if you have over $200 or $300 a month. How can you afford medical or dental care on $450 a month?

When you are ready to settle with NIC, then they don't care about the salary you've lost over the last two or three years, or the suffering you've been through. They don't consider your problems of earning a living in the future, or the effects of inflation. How is it possible for a person who is totally disabled for life to live on 50% of their former salary, as it is set out in Paragraph 4 of A.B. 115? For someone who was making $1000 at the time of his injury, this would mean living on $500 a month for the rest of his life, and never being able to work. People who are temporarily disabled due to an accident which took place after July 1, 1975, may receive up to over $700 a month; people temporarily disabled after July 1, 1976, may receive up to over $800 a month. Yet a permanently disabled person, totally disabled, may receive only about $500 based on the same salary. In just 5 or 10 years, with inflation as it is, what will $500 be worth? With this little income, you can never hope to be able to afford a home, you are forced to pay rent for the rest of your life, while rent keeps going up, and your fixed income is actually decreasing, with respect to the increasing cost of living.

All this is not to mention a person who might be less than 100% permanently disabled, who would receive a lot less, and still not be entitled to unemployment, social security, or anything else, and who might have enormous difficulty finding a suitable job, if he couldn't return to his former employment.

This situation is especially difficult for the manual worker. A person who can do a sedentary job is fortunate. But the manual worker, who runs the risk of accidents so much more, is in a terrible spot when he is physically impaired. What can he do to earn a living with an injured back? How can a skilled worker, who has spent 15 or 20 years learning a profession, start over with a new, non-physical trade? How long would it take to become skilled again?

A person who can no longer do physical work has problems with the Rehabilitation department. They don't know what to do with you, they send you from one section to another, and tell you your case is too difficult because you don't have a high school diploma and you don't speak English well enough. They consider you a hopeless case and give up. Yet in spite of these things my husband had a good and respectable profession, and earned a decent living before.

The Rehabilitation department doesn't take your problem seriously. We asked time and again for help. We told them my husband had such pain that it is difficult for him even to turn his head while driving. What did one person at Rehab. answer to this? Without mentioning her name: she told my husband to put mirrors all around the car, and forget his pain, that it was all psychological. This is not particularly amusing when you have had a ruptured disc surgically removed. For every suggestion we made, every idea we had for rehabilitation, they found a reason why it wouldn't work.

We know there are difficult cases, but people who work in rehabilitation should at least have an understanding attitude. We should not have to beg for help. What is there to hope for, if even they consider us hopeless? It's bad enough to be in pain, addicted to medication, in debt, and desperately frustrated, but it's worse to have no hope.

What can you do if you are disabled for life, and you reach retirement age? If you haven't been able to work, you can't get Social Security, and NIC cuts you off. Then how do you pay your rent? How do you eat if you haven't had enough income to save any money?

If at least the NIC could pay a lump sum for the disabled worker, then maybe he could have some hope of being able to pay for a home and a car, then he and his family would be able to survive on very little income just to buy food.

The State is losing money in wastefulness that could be put to good use helping people. Why do we have to put the government to the expense of processing disability forms every two weeks, when nothing has changed, and the injured person doesn't even see the doctor that often? And yet we have been filling out these forms, every two weeks, for nearly two years, barely surviving on what compensation my husband receives. If it weren't for the help we have received from my mother, we would have been forced to ask for charity. But what about people like us who have no one to help them?

Thank you for listening to me. I hope you will try to change this situation for the disabled people who are counting on your help.

STATE OF NEVADA
LEGISLATIVE COUNSEL BUREAU
LEGISLATIVE BUILDING
CAPITOL COMPLEX
CARSON CITY, NEVADA 89710

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March 14, 1977

Senator Thomas R. C. Wilson
Chairman of the Committee on
Commerce and Labor
Legislative Building
Carson City, Nevada 89710

Dear Senator Wilson:

You have requested my opinion concerning the amendment of NRS 616.605 by Assembly Bill No. 115, whether the new criteria for determining disability inserted in subsection 3 would be applied to persons disabled before July 1, 1977, when A.B. 115 would become effective if enacted. The answer requires an interpretation of the amendment to subsection 8, quoted below:

> 8. [The increase in compensation and benefits effected by the amendment of this section shall not be retroactive.] <u>The compensation and benefits provided by this section are fixed as of the date of the injury and are not affected by any subsequent amendment of this section.</u>

The language bracketed was first inserted in the law by section 5, chapter 233, Statutes of Nevada 1971. At that time, subsection 1 was amended to increase the minimum and maximum dollar amounts payable on account of certain disabilities. It was retained in 1973 when the dollar amounts were removed altogether. In A.B. 115, where the substantive changes do not relate to dollar amounts, the language of subsection 8 was changed to make clear that its effect is only to retain the respective dollar limits which prevailed before 1971 and between 1971 and 1973.

Therefore, the new criteria of A.B. 115 as drafted would be applied to disabilities incurred before as well as on and after July 1, 1977. The fiscal note was prepared on this basis. If it is desired to have the new criteria apply only on and after July 1, 1977, this can be accomplished by amending the bill.

Very truly yours,

Frank W. Daykin

Frank W. Daykin
Legislative Counsel

FWD:jll

TO: Frank Daykin DATE: March 8, 1977

FROM: Senator Thomas Wilson

SUBJECT: A.B. 115 - Changes provisions for permanent partial disability compensation under Nevada Industrial Insurance Act BDR 53-493

Dear Frank:

Attached is a copy of a memo received from John Reiser regarding A.B. 115. The Commerce and Labor Committee plans to hear this bill on March 16, 1977, and I would appreciate your providing me with your written opinion, as asked for by John, prior to that date.

Please route your response through Lyndl. Thanks for your help.

Senator Thomas Wilson, Chairman
Commerce and Labor Committee

TW/llp

Attachment

NEVADA INDUSTRIAL COMMISSION
OFFICE OF
THE COMMISSIONERS

MEMORANDUM

TO: Senator Spike Wilson

FROM: John Reiser

SUBJECT: AB 115

DATE: March 7, 1977

Nevada Industrial Commission legal advisors indicated in the attached opinions that AB 115 calls for retroactive application of benefits for injuries subsequent to June 30, 1973.

Frank Daykin confirmed that this bill as presently drafted calls for retroactive application when the Deputy Fiscal Analyst asked him for an opinion. Frank indicated that he would be happy to provide his written opinion to a legislator. I would certainly appreciate it if you would request this opinion from him.

/dl
Attachments: 2

Nevada Industrial Commission
Form G2L

INTEROFFICE MEMORANDUM

TO NEVADA INDUSTRIAL COMMISSION, ATT; JOHN R. REISER CHAIRMAN — ACCOUNT NO.

FROM WM. J. CROWELL - LEGAL ADVISOR — CLAIM NO.

SUBJECT AB 115 — DATE MARCH 2nd, 1977

MEMO TO NEVADA INDUSTRIAL COMMISSION

Pursuant to your request I have reviewed AB 115 with particular reference to Section 8 beginning with line 50 on page -2- with the particular amending language as follows:

> "The compensation and benefits provided by this section are fixed as of the date of the injury and are not affected by any subsequent amendment of this section."

In my opinion the amending language cited will create a retroactive application to compensation claimants in effect after July 1, 1973 through and including 1974, 1975, 1976, 1977 and hereafter. The language is not sufficiently specific to restrict the provisions of the Act to only such claims as come into being after the effective date of the legislation which would be July 1, 1977.

Respectfully submitted,

Wm J. Crowell

WJC/mh

MEMORANDUM TO: THE COMMISSION

FROM: RILEY M. BECKETT, General Counsel

SUBJECT: A.B. 115

DATE: MARCH 4, 1977

This is in response to your request for an opinion as to A.B. 115 (NRS 616.605(8) affecting the retroactivity of said bill. The existing law provides that any "increase in compensation and benefits affected by the amendment of this section shall not be retroactive." A.B. 115 deletes this provision and provides that "the compensation and benefits provided by this section are fixed as of the date of the injury and are not affected by any subsequent amendment to this section." It is apparent by this law that the introducer of this bill specifically had deleted the existing law providing for no retroactivity.

NRS 616.625 provides that the amount of any compensation and benefits are to be determined as of the date of the accident or injury, and the rights thereto shall be fixed as of such date. A.B. 115 specifically deletes section 3 of NRS 616.605 providing that "no other factors shall be considered" in PPD entitlement and provides that "other factors" comprise of four elements shall be determined in the percentage of PPD awarded. NRS 616.605 as it existed previous to July 1, 1973 provided in essence for the same thing as proposed by this bill, that being "consideration shall be given among other things, to any previous disability, the occupation of the injured employee, the nature of the physical injury, the age of the employee at the time of the injury." Thus, by NRS 616.625, as well as the proposed amendment to NRS 616.605(8), the NIC would be bound to consider these "other factors" as of the date of the injury to the claimant.

It is my opinion based on a complete review of this bill and the NIIA, that the "other factors" aspect of this bill has retroactive application for all injuries occurring subsequent to June 30, 1973.

Riley M. Beckett

RILEY M. BECKETT

RMB:ss

K

Statement of Jerry Lench, public relations director for the Southwestern States Council of Retail Clerks Unions, AFL-CIO before the Commerce and Labor Committee of the Nevada State Senate, March 30,1977

Senators, my name is Jerry Lench, and I am the spokesman for the Southwestern States Council of Retail Clerks Unions representing some 145,000 union families in Nevada, Hawaii and California. In Nevada, Retail Clerks Union Local 1536 of Las Vegas, LeRoy Glazer, president, and Local 1434, Reno, Kelley Gould, president, represent some 2500 Nevada families.

We ask your support for Senate Bill 371.

For the past three years the controversy surrounding item pricing in automated supermarkets has been the subject of legislative debate in our sister state of California. Through honest and honorable compromise--limiting the required item pricing only to automated stores, eliminating the need to price mark very small packages, like the package of gum or candy, exempting "mom and pop" stores--we reached a point this year when consumer groups, unions and the retail industry itself all supported the current California bill.

On this Monday, Assembly Bill 18 which was one of several measures for item pricing passed the California Assembly by a vote of 69-1.

During the course of the debate over the necessity for item pricing, consumer groups like Consumers Union, Consumer Federation of America and others supported the concept of item pricing as did all of Labor, including the AFL-CIO, the Teamsters and the United Auto Workers. Industry groups at first vigorously opposed mandatory price marking and asked for two major studies to be completed before legislatures acted on the subject.

The first of these studies was conducted for the industry itself by the Public Policy Committee of the Ad Hoc Committee on the Universal Product Code. At a cost of $75,000, three eastern university professors discovered what the supermaket executives could have found out by asking their wives--that consumers need prices that they can read on packages and cans to shop intelligently and to have a good memory of prices they have paid for goods. As a result of this study, the industry's own committee recommended that even after stores automate, they should continue to item price the products in readable Arabic numbers. Most store chains voluntarily complied; some refused.

A second and more ambitious study was then conducted for the Assembly of the State of California, again at the request of retail industry groups. This study of computerized checkout systems in food stores was completed and published in January of this year. It was something of a bombshell.

It showed that the savings to stores by eliminating price marking would be negligible as far as consumers are concerned; It also found that readable item pricing was especially important to the elderly, to the foreign speaking and to consumers who are serious in comparing prices. A copy of that comprehensive study is submitted with these remarks for your consideration.

The question then becomes, are the consumers of Nevada not entitled to the same protections in the marketplace as consumers elsehwere? We argue that shelf prices are not by their nature accurate enough, and we know because we are the people who work hard to keep those shelf prices current.

We argue that it has been clearly demonstrated that consumers want readable prices on packages and cans. And, we therefore pray your yes vote on SB 371 today.

"You'll have to ask the manager, lady . .. here he comes now"

STUDY OF COMPUTERIZED CHECKOUT SYSTEMS IN FOOD STORES

PURSUANT TO
HOUSE RESOLUTION No. 36, 1975

JANUARY 1977

ASSEMBLY OFFICE OF RESEARCH
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77-7

Preface

This study has been prepared to satisfy the provisions of House Resolution 36 (1975). That resolution required the Legislative Analyst and the Assembly Office of Research to examine the subject of computerized retail food store checkout systems, and to report on the following subjects:

(a) The number of food stores using such checkout systems and their sales volume;

(b) The costs and benefits to the food stores of using computer pricing;

(c) Whether food stores using such checkout systems were covered by union contracts; the provisions of such contracts relating to job security of existing employees; and the employee cost of item pricing;

(d) The impact of such installations on total employment and the use of employees in such food stores;

(e) An identification and summary of any studies or polls taken to determine customer reaction to such systems; and

(f) The impact of such installations on shopper convienence.

Part I of this study covers subjects (a) through (d) of the resolution and contains an analysis of the economic characteristics of the computerized retail food checkout system along with the possible employment impact. This portion of the report was prepared by the Legislative Analyst's office.

Part II covers subjects (e) and (f) and considers these checkout systems within the context of effects on consumers, especially the issue of item pricing. This portion of the report was prepared by the Assembly Office of Research.

Although both offices shared in the overall responsibility for preparing this study, each office maintained exclusive editorial control over, and bears full responsibility for, its portion of the report.

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INTRODUCTION AND SUMMARY OF FINDINGS

A. General Background

The major impetus behind the adoption of HR 36 appears to have been the Legislature's concerns about (1) food store employment reductions and (2) consumer shopping convenience, accessibility to price information and changes in price awareness, as associated with the installation of computerized automated checkout systems generally and the removal of item pricing in particular.

The enactment of SB 261 (Chapter 1120, Statutes of 1975) following adoption of HR 36 documents the latter concern. That bill requires retail food stores using automated checkout systems to mark specified consumer items with clearly readable prices if such items were generally item priced on June 30, 1975. However, the bill's provisions are to remain in effect for only the one year period beginning April 1, 1976 and ending April 1, 1977, thus indicating an interest by the Legislature in evaluating this report's contents prior to any decision to extend the item pricing requirement permanently. Legislation seeking such a permanent extension was introduced in 1976, but was defeated. At the time HR 36 was adopted and SB 261 enacted, only two California supermarkets utilized automated checkout systems and only one had discontinued item pricing.

B. Format of the Study

The study itself is divided into two parts, with Part I containing Chapters I through III and Part II containing Chapter IV.

Following a brief summary of the study's principal findings and conclusions in the present chapter, Chapter I provides a discussion of historical development, descriptive characteristics and extent of adoption of automated checkout systems. Chapter II examines the costs, benefits and effects on retail food store profitability of the automated systems. Chapter III applies the findings from Chapter II to produce estimates of potential employment effects of system installations in California. Part II (Chapter IV) examines the overall area of consumer polls, issues and concerns. Included in this latter chapter is a discussion of the item pricing subject as it relates to consumer price information and awareness.

Because relatively few California supermarkets have installed complete automated checkout systems at this time, it was important to draw this report's materials from as many sources as possible. These sources include (1) survey questionnaire responses by California-area supermarkets using automated systems, (2) on-site visits to automated checkout installations, (3) interviews with labor union, retail food management, consumer, equipment manufacturer, and industry trade association representatives, (4) publications, reports, and data from industry sources, and (5) selected studies by private consultants, government organizations, and academic and nonacademic researchers.

C. Principal Findings and Conclusions

Part I--Chapters I, II, and III[a]

1. Approximately 15 California supermarkets have installed optical scanner automated checkout systems which utilize the Universal Product

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a. Prepared by the Legislative Analyst.

Code. All of these stores currently item price their merchandise as specified by SB 261 (Chapter 1120, Statutes of 1975).

2. Prices of automated scanner checkout systems exhibit considerable variation, depending upon the exact type of equipment chosen. However, most systems appear to involve purchase and installation costs of between $80,000 and $150,000, although some systems cost upwards of $200,000.

3. Industry responses indicate that net before-tax savings from automated scanner systems can range from 1.0 to 1.5 percent of store sales volumes assuming item pricing elimination, and from 0.75 to 1.15 percent of store sales volumes assuming item pricing is retained. These savings primarily represent such factors as reduced labor costs, but do not include the as yet unmeasured but potentially significant future savings from such sources as improved inventory control and ordering.

4. Based upon common industry investment criteria, minimum store sales volumes required to justify scanner investment appear to be approximately $2 million per year, assuming item pricing elimination, and $3 million per year, assuming continuation of item pricing. These volumes are somewhat below the actual $4 million to $7 million range for California-area survey respondents which have already implemented automated scanner systems.

5. The potential economic rates of return on scanner investments suggest that minimum store volumes could be somewhat less than those implied by common industry investment criteria, possibly resulting in an underinvestment in such equipment in the near term.

6. There is a potential for reducing food store employment by about 10 percent to 15 percent in stores where scanner systems are adopted

and item pricing is eliminated. This potential would range from three to four positions for an $80,000 per week volume store (having total average employment of about 25 to 30 positions) to five to seven positions for a $140,000 per week volume store (having total average employment of about 40 to 45 positions). If item pricing is retained, these employment savings would be reduced by one-fourth to one-third. Not all potential savings, however, will necessarily be used to reduce employment. Thus, actual employment reductions will probably be less than potential reductions.

7. On a statewide basis, total estimated potential employment reductions in retail food stores are 5,900 to 8,650 positions assuming item pricing elimination. Assuming item pricing is retained, total reductions are 3,300 to 4,700. Thus, item pricing requirements could raise employment in retail food stores by 2,600 to 3,950 positions above that which might occur in their absence.

8. The estimated potential reductions in retail food store employment may be partially offset by induced employment in California equipment and electronics industries. For example, California scanner system installations alone could potentially generate over 5,000 ~~one-time jobs~~ and 1,000 ongoing jobs, assuming item pricing elimination. Assuming item pricing is retained, these effects would be reduced to somewhat over 4,000 and 800 positions, respectively.

Part II--Chapter IV[a]

9. To date, there have been four surveys on shopper reaction to UPC and item price removal: the Michigan State University survey,

a. Prepared by the Assembly Office of Research.

the New York Legislature survey, Mary Hurff Gylling's survey and the Field Research Corporation survey.

10. Each of the surveys had a preset goal and remained within the boundaries of that objective. Therefore, some of the issues and concerns HR 36 raises are not addressed in their entirety by any one survey, but are covered by all the surveys collectively.

11. Mandatory item pricing is law in four states: Connecticut, Massachusetts, New York and Rhode Island; also, in fourteen cities and five counties throughout the country. The U. S. Congress, in 1975, considered similar legislation which failed passage. The states of Michigan, Ohio, Colorado, Minnesota and Wisconsin considered mandatory item pricing legislation which failed enactment.

12. Consumers' contention that elimination of item price information will result in diminished price awareness is consistent with the findings of the Michigan State University (MSU) survey, which was commissioned by the grocery industry. Owning to the MSU survey, the National Association of Food Chains recommended to its membership to retain item price information. Such recommendation, though, is not enforceable and thus compliance is voluntary.

13. The grocery industry forecasts the possibility of price reduction benefits from the elimination of item price information; however, no range of price reductions has been calculated by the industry, in that prices are sensitive to many factors, such as labor and production costs, that are independent of profit percentages.

14. The computerized checkout system provides faster checkout for the shopper. Based on a survey of literature of consumer organizations, consumer reaction to the system is favorable only if implemented with item pricing.

PART I

THE ECONOMIC AND EMPLOYMENT IMPACT OF COMPUTERIZED CHECKOUT SYSTEMS

Prepared By

The Legislative Analyst

CHAPTER I

COMPUTERIZED CHECKOUT SYSTEMS IN RETAIL FOOD STORES: HISTORICAL DEVELOPMENT AND DESCRIPTIVE CHARACTERISTICS

The key features of existing computerized checkout systems in retail food stores include (1) the standardized coding and symbol system for merchandise identification normally referred to as the Universal Product Code (UPC) system, and (2) automated checkstand equipment (generally involving optical scanning devices) capable of interpreting UPC symbols in the checkout process and "linking" such symbols with corresponding product price data stored in computers. This chapter discusses (A) the Universal Product Code system, (B) the automated checkout equipment, and (C) the extent to which such computerized systems are being used in the nation and California.

A. The Universal Product Code System

General. The purpose of the Universal Product Code (UPC) system is to provide a standardized method for identifying products according to name of manufacturer and product "type" (including size and weight of packaging container). The UPC system includes both (1) the standard UPC code and (2) the standard UPC symbol. This symbol may be affixed to products at either the manufacturing, wholesale or retailing levels, and is capable of being interpreted by automated checkstand equipment utilizing devices such as optical scanners. Whenever an individual grocery item's UPC symbol is "scanned" and its UPC code registered at the checkstand, the corresponding product price is automatically called forth from a computer file.

Historical background. Initial interest in automated checkstands dates back past the 1930's. The testing of such systems began in the 1950's at the retail level with Stop and Shop. By the late 1960's the commercialization of the laser beam had led to improved optical scanning equipment. In addition, food industry trade groups and equipment manufacturers had begun discussions concerning possible optical product code structures, and several grocery chains had developed their own manual code systems. The first concentrated, industry-wide response to the need for a standardized product coding system surfaced in 1970, when the nation's six major grocery industry associations formed the Grocery Industry Ad Hoc Committee on Universal Product Coding.[1] Comprised of five grocery manufacturers and five grocery distributors, the committee became the central force behind the policies and decisions of the UPC effort. The committee recommended in mid-1971 that (1) the grocery industry adopt a single, common code, (2) that this product code should consist of 10 numeric digits divided into two groups of five each (the first to uniquely identify manufacturers and the second to uniquely identify specific individual products of a manufacturer), and (3) that the associated code symbol should be in a standard, machine-readable format. The choice of the 10-digit numeric code meant that much of the computer conversion cost of the new system could be bypassed, since many companies used a five-digit code number already for identification of their various products. Such companies could thus convert to the UPC code simply by adding their new manufacturer's number while retaining their existing internal product coding system.

At this point, the Ad Hoc Committee subdivided into the two areas of code management and symbol application. The Universal Grocery Product Code Council (previously the Code Management Subcommittee) contracted with the service bureau now known as Distribution Codes, Inc., to facilitate administration of the 10-digit UPC code.

At the same time, the Symbol Selection Subcommittee addressed the problem of symbol standardization. In April 1973, the subcommittee officially recommended as a symbol a linear bar code represented by a series of thin and bold vertical lines and having the 10 human-readable numerics directly below (with two thin and two bold lines of varying width per numeric). This symbol, capable of generating over 10 billion different linear bar combinations, carries a standard design width of roughly 1-1/2 inches with the potential to be expanded 100 percent or reduced by 20 percent. The symbol requires no special ink, may be applied in different colors, and may be applied by any of the one-half dozen conventional printing processes to any of the 30 kinds of materials generally used to package grocery items. The symbol itself may be located on the tops, bottoms and sides of packages, or on attached tags.

The principal criteria behind the symbol's selection included (1) strong error detection capability (the symbol's initial tests at Battelle yielded less than one error per 10,000 optical scans)[2], (2) demonstrated technical feasibility, and (3) compatability with the source marking processes of grocery manufacturers and private label retailers, as well as with the in-store marking processes of retailers using hand printing and labeling devices.

Importance of source marking of symbol. The grocery industry's initial decision to encourage the UPC standardized coding and symbol system reflected the expectation of benefits (1) at the retail level (more accurate pricing, faster checkout, possibility of lower or less rapidly rising grocery prices, detailed consumer receipt tape, etc.), (2) at the wholesale level (administrative cost reductions due to store and vendor order processing, and warehouse operation improvement), and (3) at the manufacturing level (including prepricing, coupon control, information on product movement and reduced stock shortages).[3]

The main prerequisites for realizing these benefits involve (1) the extensive conversion to the UPC numeric code system by manufacturers and retailers, and (2) the extensive application of the UPC symbol to food store merchandise at an appropriate production stage. The code conversion process appears to have progressed rapidly. For example, by early 1975 some 3,000 food manufacturers and retailers belonged to the UPC Council, accounting for roughly 70 percent of the food industry's sales volume at the manufacturing level. Subsequent conversion has increasingly spread to small and medium sized manufacturers. Concerning the application of the UPC symbol, the symbol may be affixed at either the manufacturing, wholesaling or retailing level. However, extensive source symbol marking (i.e., at the manufacturing level) is an important condition for maximizing the overall profitability of the UPC system, primarily because this allows maximization of the UPC-related savings at the retail level. For instance, even though existing technology permits symbol printing and application by retailers for general grocery merchandise (in addition to meat, cheese and fresh produce), the costs of doing so

have been estimated at $5 to $6 per thousand items, compared to 20 cents to 35 cents per thousand items at the manufacturing level and $1 per thousand items ($3 per thousand items for repricing) for regular item pricing by retailers.

Given this, source marking has been strongly encouraged by the UPC Committee, particularly for fast moving, standard grocery items. At this time, close to 5,000 suppliers are UPC members, with nonmembers primarily being small manufacturers. Source marking now represents some 75 percent to 80 percent of general grocery food items and even higher percentages for fast-moving items. These shares will rise further as inventories of non-UPC labels are reduced and as small and medium sized manufacturers arrange to finance the capital investment required for source symbol marking. In contrast, a very high share (perhaps 50 percent) of nonfood grocery items are not presently source marked.

Code conversion costs themselves appear relatively minor, partly because adoption of the 10-digit UPC numeric code allows retention of existing manufacturers' five-digit product codes; additionally, the fixed cost of joining the UPC system and receiving a manufacturer's code number is generally under $10,000 and can be as low as $250. However, source symbol marking costs can be significant (i.e., thousands of dollars), due to such initial fixed costs as redesigning label printing plates.[4] It has been argued that these cost figures overstate the true marginal costs of implementing source marking, since many manufacturers may time UPC source marking conversion to coincide with label changes mandated for reasons unrelated to the UPC system (such as Food and Drug Administration

requirements). Such timing has been in fact facilitated by the gradual phasing-in of the UPC system. Nevertheless, certain smaller firms may inevitably face disadvantages, particularly if their smaller volumes are spread over a variety of product and packaging types.[5]

B. Automated Checkout Equipment

Retail food stores are an important component of the automated checkout equipment market.[6] By early 1976 an estimated 26,000 units worth $140 million had been installed in retail food stores nationally, including several dozen optical scanning systems integrated with the UPC coding and symbol system.[7] Although hand-held optical wands were initially experimented with, laser scanners built into checkstands have now become the predominant scanning device. With such scanning systems, checkout clerks do not read the prices of most items or punch them up on the cash register as in conventional checkouts. Instead, checkers pass individual items having UPC code symbols over the optical scanners, and item prices corresponding to UPC code numbers are reported to the register from an in-store micro-processor or minicomputer. On-line central computers are also feasible, which can tie together chain stores and open possibilities of time sharing for smaller stores.

The scanner itself contains a moving beam of light that is reflected back through a window in the checkstand as an item passes over it. The reflected light beam is transformed to electrical signals and then translated into the numeric code. The register subsequently prints out an item's description and price on the customer's sales receipt. As

the item is registered a television-type screen at the checkout counter displays the item's price. Some stores have also experimented with providing customer-operated electronic scanners allowing customers to verify prices prior to checking out. The UPC code symbol itself does not contain or show price information. Rather, retailers enter prices into in-store computers systems and link them with items' UPC code numbers. In this manner, all price changes can be made within the computer (including from a remote central processor), providing that an item carries a UPC code symbol. Technically, this eliminates the need for item pricing and/or repricing for checkout purposes (although stores may choose to continue item pricing for other reasons).

For items not carrying regular UPC symbols, special code numbers can still be assigned in-store and retailers can either (1) hand code such items into the system or (2) apply special UPC symbols in-store for scanning purposes. In-store symbol application has been facilitated by the development of equipment which can actually print and apply a special six-digit UPC code symbol. Retailers may then assign merchandise not carrying regular UPC code symbols a special six-digit code number which can in turn be linked in the computer to appropriate prices. The hand coding (or key-entry) option to call forth appropriate prices from the computer for items without scannable symbols is commonly utilized for fresh, perishable produce. Electronic scales allow the computer to determine the appropriate price by applying a product's weight to computerized data on price per unit of weight. However, both hand-coding and in-store symbol

application are time-intensive and costly operations which reduce potential system benefits. In addition, in-store equipment is expensive.

Potential scanner system benefits include increased checkstand productivity through faster ring ups (thereby saving both labor hours and customer waiting time); elimination of intentional and unintentional misrings; the possibility of eliminating or reducing the extent of item pricing and repricing; easier computation of taxes, discounts, and qualification for food stamps and coupons; improved inventory management; better data on labor productivity and on the sales records of individual merchandise items; facilitation of automatic customer billing and credit verification; improved labor hour scheduling; automatic reordering; analysis of advertised sales, shelf placement and new item profitability; more efficient storage and warehousing of products; a more detailed sales receipt for customers; and better control and identification of "shrinkage" (i.e., the disappearance of store inventory stocks). The economics of these benefits, relative to costs, are addressed in Chapter III.[8]

Four special concerns - energy, safety, accuracy and fraud. Although computerized optical laser supermarket scanning systems are capital intensive by nature, their energy requirements appear only marginally higher than those for conventional systems. The Computer and Business Equipment Manufacturers of America has noted that an average automated system consumes approximately 1,000 kilowatt hours monthly, leading to increased average store energy costs of perhaps 1 percent. The laser beam scanner itself uses less electricity than a 25 watt light bulb (generally being less than one milliwatt, or 1/1,000 of a watt). IBM predicts that their 3660 supermarket scanning system can actually save

approximately 350 kilowatt hours monthly for a typical system with 10 stations and 10 scanners, because the terminal station is designed to automatically turn off power to the controller and scanner when stations are in inactive modes. In addition, any increase in energy use per checkstand hour could potentially be offset by more efficient use of operating time and labor scheduling.

Concerning safety, the laser light in these automated systems is a relatively low-power light source comparable to normal supermarket lighting. Scanners are required to meet federal safety criteria established by the Bureau of Radiological Health for Class I operation, applicable for lasers considered to be incapable of producing damaging radiation levels. Scanners are built with extensive shielding, interlock and fail safe devices. Electrical work is approved for listing with the Underwriters Laboratories. There is no evidence that supermarket lasers contaminate food or cause eye damage and other health problems.

The accuracy of scanner systems in reading UPC code symbols and carrying out required checkstand computations has been thoroughly documented. For instance, 15 months of tests by Kroger in Ohio reportedly scanned over seven million items without a misread in 1972-73, an improvement over tests in Switzerland in 1972 where errors occurred once per 70,000 rings. Misreads and substitutions of incorrect prices are highly unlikely, and when UPC symbols are defaced, smudged, otherwise damaged or inappropriately applied in-store, the scanner will simply not register the item, thus requiring key entry of the UPC code number. Scanner systems are probably far more accurate than conventional systems in bill totaling,

differentiation between taxable and nontaxable items, giving credit for purchase of multiple items, indicating food stamp qualifications, and so forth. That aspect of accuracy related to the consistency between shelf labels and computer-stored item prices is a function of responsible store management. Errors are inevitable. However, retailers responding to our survey questionnaire indicated they had implemented shelf labels which are difficult to move and dislodge. In addition, in-store procedures generally require that shelf label changes be made prior to the updating of computer price files and the opening of stores in the morning. It is important to remember that pricing errors are already common under the conventional checkout system, including incorrectly marked item prices.

Fradulent employee use of systems is minimized by the use of special identification codes for system operation, although store management will be ultimately responsible for keeping employees from having access to special UPC in-store labels for personal use on in-store-marked items. Although in-store affixed UPC labels can be peeled off and substitutes made, this behavior is partially deterred by the sensitivity of the scanner to damaged labels. Regardless, label tampering is already a problem with non-UPC labeling and pricing in conventional checkout systems. Scanner systems will clearly limit the ability of individual checkers to overcharge and undercharge customers, and will enable stores to more accurately measure and identify the nature of store "shrinkage". While some potential for fraud exists, it is (a) already present with existing conventional systems and (b) doubtful that scanner systems (especially when accompanied by item pricing) significantly increase this potential. For

example, customer credit information is already maintained by stores with "point-of-sale" equipment, even when scanners are not involved.

C. Extent of Adoption of Automated Scanning Checkout Systems

As of November 1976 the Supermarket Institute reported 103 automated scanner installations operating nationally, with 15 located in California and one in nearby Nevada. The first national installation occurred in June 1974 by Marsh Supermarkets, Inc., in Troy, Ohio. Initial California installations included those by Ralph's Grocery Company (September 1974 in Lakewood, California) and Gemco Department Store (Lucky Stores, January 1975 in San Leandro, California). Currently operating installations in California are offered by Ralphs (seven), Lucky-Gemco (three), Lucky (one), Southland Markets (one), Continental Markets (one), Cala Foods, Inc. (one), and Alpha Beta Company (one). Safeway's initial installation is in Carson City, Nevada. Because of the current California item pricing requirement as provided by SB 261, all California scanner installations presently have item pricing. However, the Lucky-Gemco operation did experiment with item price removal from the date of system installation in January 1975 until April 1, 1976.

Retail food stores responding to our survey questionnaire concerning their operating experience with the automated scanner systems showed a range of weekly store volume of $80,000 to $150,000, or in excess of $4 million per year. The percentage of store employees who were unionized was close to 100 percent (except for store managers). In-store hourly labor costs ranged from slightly over $5 to nearly $9 (including fringe benefits). Most respondents indicated plans to implement additional scanner operations

in the future. IBM appears to be the dominant equipment manufacturer for existing scanner installations, accounting for 50 installations nationally as of July 1976. In California, IBM currently accounts for 12 installations with NCR servicing two, and Datachecker, one.

Scanner versus nonscanner automated/computerized installations. The emphasis in this report is on automated scanner systems. However, it is important to remember that both stand-alone electronic registers and other automated systems have been extensively installed in retail food stores. Because these nonscanner systems can often be converted rather easily to full scanner systems, sole emphasis on the latter tends to understate the true magnitude of and potential for more complete check-stand automation in the near future.[9]

Ralphs, for example, reported in August 1976 having not only seven IBM 3660 Full Scan Systems utilizing 76 terminals and scanners, but also six IBM 3660 Key Entry Systems without scanners and nine National Semiconductor Key Entry Systems without scanners. Progressive Grocer reported as early as December 1974 that as many as 1,500 stores nationally had technical equipment to facilitate convenient scanner conversion.

CHAPTER II

ECONOMIC ASPECTS OF COMPUTERIZED CHECKOUT SYSTEMS: COSTS, BENEFITS AND PROFITABILITY

This chapter discusses certain economic aspects of computerized scanner checkout systems, including (A) purchase, installation and maintenance costs; (B) potential benefits; and (C) the resulting effects on food store profitability. Potential employment implications for California are examined in Chapter III.

A. Purchase, Installation and Maintenance Costs of Automated Checkout Systems

Purchase and installation costs for automated checkstand systems depend upon equipment manufacturer and model, number of checkstand units per store installation, and the cost of training time for checkers, cashiers and management personnel. However, industry-related spokesmen have suggested to us that purchase costs may decline in the future as (1) competition among equipment manufacturers intensifies and (2) initial system development overhead costs can be spread over more and more store installations. Thus, current system implementation costs may overstate probable future costs.[10]

According to our survey questionnaire responses, California-area firms paid purchase and installation costs of between $150,000 and $200,000 for IBM equipment (involving 9 to 10 checkout lanes), approximately $140,000 for National Semiconductor equipment (for eight lanes including $55,000 for processor, $6,000 per terminal and $4,000 per scanner), and $5,200 per month rental costs for National Semiconductor equipment (nine lanes).[11]

Incremental costs for additional checkstands were reported to range from $10,000 to $15,000 for IBM equipment and from $8,000 to $10,000 for National Semiconductor equipment, with price variation in part reflective of differences in equipment characteristics. Although not all respondents were able to estimate operating and maintenance costs of scanner systems because of limited operational experience, reported costs ranged between $450 and about $1,200 per month for 8 to 10 checkout lanes.[12] We have been told that a comparable cost estimate for an eight-lane conventional checkout system is $600 per year.

Respondents also noted the need for employee training time for successful scanner conversion, ranging from 8 to 16 hours per checker/cashier and from 14 to 16 hours for management personnel. In addition, respondents indicated that considerable on-the-job training experience is necessary to fully capture potential productivity gains. The above figures do not incorporate the time involvement of top-level management personnel, which can be significant. One chain, for example, noted some 8-1/2 personnel-years associated with its initial trial installation.

B. Economic Benefits to Retail Food Stores From Scanner Installations

General. Potential retail benefits available from scanner system implementation are generally decomposed into the components of (1) hard savings (including improved checkstand productivity and the reduction or elimination of item pricing) and (2) soft savings (representing a wide variety of factors including automatic ordering and reordering, improved shelf space allocation, sales analysis, more efficient labor

scheduling, "new item" tracking, and the identification and control of theft, fraud and other causes of store "shrinkage"). While some of these savings are obtainable using point-of-sale equipment without scanners, all are relevant to consider when scanner systems replace conventional registers.

Considerable effort has been expended to estimate the probable magnitude of such savings, particularly the hard savings component. However, the relatively few cases of extensive operating experience make such estimates rather tentative. Because the hard savings are clearly more easily observable and immediately realizable than most soft savings components, it is not surprising that hard savings have received the most emphasis. For example, most food retailers which have installed systems in Califorina are expecting to recover purchase and installation costs from hard savings alone. In contrast, considerable uncertainty surrounds the probable magnitude of soft savings. This is not to suggest that soft savings are of minor interest. On the contrary, concensus appears to exist that eventual soft savings potential is enormous given sufficient experience with the systems, particularly for well-integrated major retailing chains. One large California chain using scanners has indicated its hope that soft savings will at least equal hard savings.

Given the unknown magnitude of soft savings, our discussion of retailer benefits concentrates on hard savings which, in practice, appear to be used initially to justify system installations. Most industry-related estimates of these savings appear to range from 1 percent to 1.5 percent (net and before tax) of retail store sales volumes, depending

upon such factors as the percentage of store volume having UPC source-marking, sales volume per customer, the mix between types of grocery and nongrocery items, and the assumption that scanners replace conventional mechanical registers. This savings range has been found consistent with a number of test operations and actual in-store experiences. The range also appears generally consistent with industry-related estimates of register balancing costs, checkstand underrings, retail food store labor costs, potential checkstand productivity gains of 15 percent to 25 percent, and possible item pricing savings of between one-third and one-fourth of total hard savings.[13]

Examples of specific operational experience. The most thorough analysis of scanner benefits under operating conditions appears to be that undertaken by Giant Foods, Inc., with assistance from IBM and based upon experience from five scanner installation stores. Benefits were estimated for "front-end labor" (i.e., checkers and baggers at the checkstand), elimination of price marking and remarking, routine reordering, register balancing, underring elimination and register replacement.

Table 1 summarizes Giant's savings estimates for a $140,000/week store with 12 checkout lanes, using a scanner in place of conventional mechanical registers. Gross before-tax savings equal nearly 2.0 percent of sales. The closer approximation to hard savings, derived by excluding automatic ordering and reordering (a form of soft savings), equals 1.8 percent. Giant's figures seem quite consistent with the widely quoted 1.0 percent to 1.5 percent before-tax net savings range. Price marking savings represent about 25 percent of estimated hard savings.

TABLE 1

SAMPLE SAVINGS POTENTIAL FROM SCANNER UTILIZATION EXPERIENCED BY GIANT FOODS, INC.[a]

Savings Source	$ Per Month	Percent of: Estimated Savings	Percent of: Store Sales[g]
Front-End Labor[b]	$ 5,112	42%	0.84%
Price Marking[c]	2,745	23	0.45
Register Balancing	1,770	15	0.29
Underrings[d]	909	8	0.15
Register Replacement[e]	373	3	0.06
Subtotal	$10,909	91%	1.80%
Routine Ordering[f]	1,146	9	0.19
Total	$12,055	100%	1.99%

a. Source: Giant Foods, Inc., Computer Assisted Benefit Studies, January 1976. Figures are standardized to reflect weekly store volume of $140,000. Savings do not reflect maintenance costs of scanner units.
b. Includes checkout and bagger operations which were about 25 percent faster when checking a test sample of 27 items.
c. Excludes any additional shelf maintenance costs following item price removal.
d. Assumes normal net loss of 0.2 percent of sales, and 75 percent loss reduction with scanner.
e. Reduced costs of servicing and replacement for mechanical cash registers which were replaced by scanners.
f. Assumes 80 percent of throughput carries source marking of UPC symbols.
g. "Before-tax" figures.

Although most survey questionnaire respondents lacked sufficient operational experience to estimate scanner savings reliably, one major California chain (which is item pricing) noted a $40,000/year savings

due in part to a 20 percent increase in customer throughput productivity and a 10 percent to 15 percent reduction in front-end labor costs. Based upon a $150,000/week sales volume and adjusting for such factors as price marking, underrings, and register replacement savings yields a savings figure of slightly under 1 percent of sales. This lower level of savings relative to the Giant Foods example appears partly due to several factors. First, the California chain reported relatively lower front-end labor cost savings than Giant (possibly because initially it was more efficient). Second, there were fewer average items per customer in the California store (roughly 13 items) than in Giant's store (27 items). And third, a lower level of source symbol marking occurred in the California store (some 60 percent) than in the Giant store (about 80 percent).

Item pricing savings potential. The exact cost of item pricing can differ considerably between stores. However, information from the Giant Food's experience, our California area survey respondents, and other industry writings indicates that potential savings from elimination of item pricing could represent 25 percent to 30 percent of hard savings potential or, based upon the 1 percent to 1.5 percent before-tax hard savings range, between about 0.25 percent and 0.45 percent of sales volume. Giant's estimates of weekly savings reflect the upper 0.45 percent of sales bound, representing between 70 hours and 75 hours weekly for original marking (35 percent), remarking (52 percent) and management review (13 percent). The exact level of potential price marking savings properly attributable to scanning system use will differ between stores depending partly upon the extent of repricing prior to scanning use.

In addition, it must be determined whether any initial absence of repricing represents a problem of excessive cost as opposed to conscious consumer-oriented "goodwill" efforts by stores. Furthermore, shelf label maintenance required in the absence of item pricing may affect item pricing net savings, depending upon store shelf labeling policies prior to item price removal. In some cases such offsets could be significant.

The significance of UPC source symbol marking. Food store items which are not source symbol marked reduce potential store savings by lowering front-end productivity gains (due to key entry requirements at the checkstand) and/or requiring in-store application of special scanner-readable labels. Survey respondents indicated that scanner profitability requires between 70 percent and 80 percent source symbol marking of store sales turnover (including meats and produce), whereas their actual experience ranged between 50 percent and 70 percent at the item of the survey. Some California-area stores were found to be in more advantageous positions than others. Lucky-Gemco, for example, reported a relatively high percentage of source marked turnover, partly because nongrocery items are sold outside of the supermarket area yet within the Gemco store. Grocery sales as a percent of store sales ranged from about 50 percent to over 70 percent for surveyed stores. Scanner profitability increases for higher levels of grocery sales, thus creating interstore differences in potential savings.

Different stores appeared to treat nonsource marked items in differing fashions. Some utilized label printers and applied in-store scanner-readable labels at weighing stations to meats, while others did not. Some treated fresh produce with code entry at the checkstand, while

others did not. In addition, some treated nonsource marked items such as imports, liquor and small manufacturer items by in-store label application, while others merely item priced such commodities. Although hand-held UPC label applicators are available, one respondent felt that such equipment use was expensive and not generally practical except for in-store testing of potential system benefits for high levels of UPC coding. Another chain utilizing selective in-store label application noted weekly costs of about eight hours, or $50.

All survey respondents indicated that UPC labeling problems continue to exist for nonsource marked items, random weight prepackaged items such as cheeses and meats, beverages, glass packaging, wax packaging, application to cellophane packages, and plastic loose packs such as for bread, rice, beans and frozen foods. However, the respondents also all denied any need or intention to reduce or eliminate ordering of nonsource marked items.[14]

C. Retail Food Store Profitability and Scanner-Related Implications

Requirements for scanner installation: Recovery periods, return on invested capital and minimum store size. Capital investment decisions may be based upon a variety of approaches to capital budgeting, including the average rate of return method, the net present value method, the internal rate of return method, and the pay back method.[15] Concerning the decision criteria used for UPC-related scanner system investments, industry-related representatives have indicated to us that no single method is consistently applied on an industry-wide basis.[16] In addition, it has been suggested that many retail food industry firms may tend to apply relatively unsophisticated

economic decision criteria to capital investment decisions regarding UPC, especially in light of the many uncertainties about the cost and benefit estimates of scanner systems (including economic and physical life spans). Perhaps of equal importance is the relatively limited experience which the retail food industry has had regarding major capital equipment investment outlays.

However, if any single investment criteria or decision rule best describes the industry's general approach to scanner checkout systems, it appears to be the simple pay back method. For example, both industry-related consultants and survey questionnaire respondents have generally suggested that pay back periods of two to three years, based upon before-tax cash inflows, are common for scanner system installations that replace conventional mechanical registers.[17] The pay back period itself is defined as the number of years required to recover an initial cash investment.[18]

Such pay back periods are sufficiently short relative to probable scanner life spans as to suggest potential economic rates of return on investment favorable to the industry's general overall return rate on stockholders' equity. The preference for these short pay back periods may in part reflect risks and uncertainties concerning the possibility of item pricing legislation, the ability to capture potential productivity gains, the magnitude and achievability of eventual soft-savings potential, future developments in automated checkout technology which might outdate existing systems, and cash-flow considerations.[19]

Assuming a before-tax net savings range of 1.0 percent to 1.5 percent on store sales from hard savings, Table 2 provides estimates of

minimum retail food store sales volumes necessary to justify scanner installations. These estimates are developed for specified assumptions concerning both pay back periods and scanner system purchase and installation costs.

An annual sales volume of $3 million, and certainly not less than $2 million, seems necessary to justify scanner-system investment on the basis of hard savings alone within a pay back range of three years or less. Minimum store volumes are lower for longer pay back intervals, but these may not be acceptable from industry's viewpoint. In addition, these minimum volume figures may understate the real potential for scanner adoption. For example, (1) food price inflation will inevitably increase store sales volumes over specified pay back periods; (2) the degree source symbol marking will continue to increase; (3) system purchase and installation costs may well decline due to competition amongst equipment producers; (4) investment-related tax benefits, such as investment tax credits, have not been included in the computations; and (5) business investment planners know that future soft savings from scanner systems, though presently unknown, are potentially significant and may even begin to emerge within pay back periods.[20]

Item pricing implications. Because the effects of complete elimination of item pricing unaccompanied by offsetting shelf labeling costs appear to potentially lie in the range of 25 percent to 30 percent of hard savings, scanner savings with maintenance of item pricing suggests potential savings of roughly 0.70 percent to 1.15 percent of store sales volume. Assuming that price removal would not hurt sales volumes through

TABLE 2

MINIMUM STORE SALES VOLUME
NEEDED TO JUSTIFY INVESTMENT IN SCANNER EQUIPMENT[a]
(ITEM PRICING ELIMINATED)

Investment Pay Back Period	Scanner System Purchase and Installation Costs[b]	Minimum Store Sales Volume Annual (millions)	Minimum Store Sales Volume Per Week
Case A - 2 years			
	1. $150,000	$5.0 - $7.5	$95,000 - $145,000
	2. 100,000	3.3 - 5.0	65,000 - 95,000
	3. 80,000	2.7 - 4.0	50,000 - 80,000
Case B - 2½ years			
	1. $150,000	$4.0 - $6.0	$75,000 - $115,000
	2. 100,000	2.7 - 4.0	50,000 - 80,000
	3. 80,000	2.1 - 3.2	40,000 - 62,000
Case C - 3 years			
	1. $150,000	$3.3 - $5.0	$65,000 - $100,000
	2. 100,000	2.2 - 3.3	42,000 - 65,000
	3. 80,000	1.8 - 2.7	35,000 - 52,000

a. Computations assume before tax net savings of 1.0 percent to 1.5 percent of store sales volume. Pay back criteria reflect dollar inflows net of scanner system operating and maintenance costs. Somewhat lower minimum store volumes will result if pay back criteria reflect gross dollar inflows.

b. Figures for purchase and installation costs do not specifically include any support costs for system operation which may be provided to individual stores by central management facilities.

loss of customer purchases, minimum store sizes for the previous investment-related assumptions are shown in Table 3. Minimum store size appears to rise from $2 million to $3 million when the potential for item pricing savings is eliminated.[21]

TABLE 3

MINIMUM STORE SALES VOLUME
NEEDED TO JUSTIFY INVESTMENT IN SCANNER EQUIPMENT[a]
(ITEM PRICING NOT ELIMINATED)

Investment Pay Back Period	Scanner System Purchase and Installation Costs	Minimum Store Sales Volume Annual (millions)	Per Week
Case A - 2 years			
	1. $150,000	$6.5 - $10.7	$125,000 - $205,000
	2. 100,000	4.4 - 7.1	85,000 - 140,000
	3. 80,000	3.5 - 5.7	65,000 - 110,000
Case B - 2½ years			
	1. $150,000	$5.2 - $ 8.6	$100,000 - $165,000
	2. 100,000	3.5 - 5.7	65,000 - 110,000
	3. 80,000	2.8 - 4.6	55,000 - 90,000
Case C - 3 years			
	1. $150,000	$4.4 - $ 7.1	$ 85,000 - $140,000
	2. 100,000	2.9 - 4.8	55,000 - 92,000
	3. 80,000	2.3 - 3.8	45,000 - 75,000

a. See Footnotes to Table 2. Computations assume before tax savings of roughly 0.70 percent to 1.15 percent of store sales volume, net of scanner system operating and maintenance costs.

True economic rates of return from scanner systems. The "true" economic rates of return on scanner investments should reflect the benefits produced over the equipment's entire life span. However, the pay back periods generally used by the industry appear to be less than the probable life span of scanner equipment.[22] This disparity between the length of pay back periods and equipment life spans suggests that scanner systems may produce quite favorable rates of return. McKinsey and Company, for instance, suggested the possibility of an average after-tax return on average scanner investment over 10 years in excess of 30 percent. Our research suggests that "true" economic rates of return on scanner investments may be greater than that characterizing retail food industry stockholder equity generally.

For example, minimum before-tax annual net rates of return on investment outlays for the assumptions of a 2½ year pay back period and an 8 - 10 year life span lie in the range of 35 percent to 40 percent.[23] Such return rates, if adjusted for corporate tax liabilities, accelerated depreciation, and federal investment tax credit provisions, appear generally to exceed the retail food industry's overall after-tax net returns on stockholders' equity.

This suggests that scanner system investment decisions based upon the specified pay back criteria could generate levels of investment a bit below those justified on the basis of "true" economic rates of return.

Utilization of potential scanner-related savings. Both hard and soft savings can be "realized" in a variety of ways, including the lowering of food prices, less rapidly rising food prices, improved retail food

store profits, increased store salaries and/or wage rates, and improved customer services (including less checkstand waiting time). In addition, slack labor time may occur and, if the systems are not efficiently utilized, potential savings may not materialize at all. California-area installations indicated that part of any benefits would be used to restrain food prices and improve customer service. In contrast, no respondents indicated that other capital investments would be financed from scanner savings, and mixed feelings emerged concerning the retention of savings as profits. Several respondents stressed their uncertainty as to quantifiable benefits levels, pointing out that insufficient operating experience in enough types of store environments currently exists to be certain of the probable magnitude of eventual savings, including soft savings.

The most noticeable benefit of the scanner technology may not be so much its potential to reduce consumer food prices significantly as its potential to raise the retail food industry's return on equity. There will be pressures by competitors and consumers to channel some of these savings into reduced prices, by labor unions to channel a portion into higher wages and benefits, and by stockholders to channel them into higher profits. However, even the complete allocation of scanner savings toward restraining food prices would have relatively minor effects on individual shoppers. For example, a net before-tax hard savings of 1 percent to 1.5 percent of store sales volumes would reduce the average store purchase (about $10 in most store installations) by only 10 cents to 15 cents. Such reductions, though significant in the aggregate, are hardly substantial for the individual consumer. In contrast, the allocation of scanner

savings to profits could substantially raise the industry's return on equity. This is because the industry's extremely high ratio of sales volume to invested capital can make a small increase in the ratio of profits to sales consistent with a healthy increase in the level of profits relative to stockholders' equity.[24]

Overall food industry profitability and market concentration: implications of computerized checkout systems. The continued development and adoption of computerized scanner checkout systems may significantly affect both profitability and market structure in the retail food industry. For example, minimum store size requirements may influence both the degrees of competition and concentration within food retailing. More specifically:

(a) Scanner systems appear to favor large stores and, in particular, chain store operations. As a result, overall food retailing concentration may tend to rise;

(b) Competition between larger and smaller stores may tend to weaken;

(c) Competition between stores installing scanner equipment may intensify; and

(d) Requirements to continue item pricing could primarily benefit larger stores and especially chain store operations, at the expense of small stores and nonchain operations.

The basis for these conclusions is amplified in the following discussion of (1) existing industry concentration and profitability, and (2) related scanner system implications.

1. Food Retailing Market Concentration and Profitability

Food retailing involves some 200,000 individual grocery stores nationally, of which 40,000 to 45,000 are classified as "supermarkets". In the aggregate, net after-tax retail food chain profits average in the vicinity of 1 percent of sales. These figures are often interpreted to imply that food retailing is a highly competitive industry. However, the industry is far more concentrated, more profitable and generally less competitive than such figures might initially suggest.

Market concentration. In 1973 the top 20 national supermarket chains accounted for 41 percent of all grocery sales and 73 percent of grocery chain sales. The four largest chains accounted for over 20 percent of total grocery sales and over 36 percent of all chain sales.[25]

Such figures actually understate "true" economic concentration based upon the concept of "relevant market areas". In 1967, for example, a special Census Bureau tabulation indicated that the four largest food retailers in each of 218 individual local market areas averaged over 50 percent of market area sales. Subsequent Federal Trade Commission and private industry surveys showed increased concentration over time with large chains significantly dominating local markets.[26]

Both the Federal Trade Commission and the National Commission on Food Marketing have previously noted the existence of noncompetitive elements and the persistence of high profit levels in food retailing. Further, food chains with the largest market shares in metropolitan areas have generally experienced relatively higher net profit rates and gross margins than elsewhere.

TABLE 4

CALIFORNIA RETAIL FOOD STORES AND SALES VOLUMES[a]

Grocery Stores[b]	Number of Stores			Sales (In Millions)		
	Chain	Independent	Total	Chain	Independent	Total
Supermarkets						
Over $4,000,000	560	125	685	$3,100	$ 900	$ 4,000
$2,000,000 to $4,000,000	1,146	325	1,471	3,450	1,100	4,550
$1,000,000 to $2,000,000	323	407	730	550	700	1,250
Total	2,029	857	2,886	$7,100	$2,700	$ 9,800
Superettes ($500,000 to $1,000,000)	350	616	966	$ 280	$ 520	$ 800
Small Stores (Under $500,000)	105	5,143	5,248	35	815	850
Convenience Stores (Under $250,000)			1,700			400
Total, Grocery Stores			10,800			$11,850
Other Food Stores (Specialty) Meat, Seafood, Fruit and Vegetable, Confectionary, Bakery, Dairy Products, etc.			7,000			$ 1,000
Total, Food Stores			17,800			$12,850

a. Source: Table developed by the California Retailers Association, based upon data from the Progressive Grocery Data Center (New York) and U.S. Census of Retail Trade--California, (1972).

b. Definitions:
Supermarket--Any store, chain or independent doing $1,000,000 sales volume or more per year.
Superette--Any store doing $500,000 to $1,000,000 a year.
Small Store--Any store doing less than $500,000 a year.
Convenience Store--Small, compact, self-service, open long hours and featuring a limited line of brands and sizes. These drive-in stores do up to $250,000 a year.
Independent--An operator of fewer than 11 retail stores.
Chain--An operator of 11 or more retail stores.

Concerning California concentration levels, Table 4 summarizes the distribution of numbers, types and sales volumes of 1974 establishments, as estimated by the California Retailers Association. Supermarkets ($1 million or more annual sales volume) accounted for less than 30 percent of grocery stores but over 80 percent of grocery sales. Large supermarkets (over $4 million annual sales volume), with under 7 percent of number of grocery stores, accounted for nearly 35 percent of grocery sales. Safeway, Lucky, Alpha Beta and Ralphs together accounted in 1974 for nearly 40 percent of all supermarket stores in the state. All four of these chains have begun to use scanner checkout systems in certain stores.

Profitability of food retailing. Although food retailing representatives generally discuss profitability in terms of percentages of sales, profits as a percent of stockholder equity is the appropriate measurement because returns to investment capital are considered. Food retailing is characterized by a low level of capital intensity relative to sales, as compared with most other industries. This suggests that a low ratio of profits to sales may still be consistent with a healthy ratio of profits to equity. Indeed, this has generally been the case for retail food corporations as a group, particularly retail food chains (Tables 5 and 6).[27]

Research by the Federal Trade Commission (Table 7) has further indicated that (a) a relatively small number of large food chains cause considerable effect on the movements of aggregated rates of return, and (b) return rates for the largest companies consistently tend to exceed those of smaller ones.

Given the levels of market concentration in food retailing, it is not surprising to see healthy food retailing rates of return or to find firms with large market shares in metropolitan areas often experiencing comparatively high net profit rates and gross margins.

2. Implications of the UPC Scanner Technology on Food Retailing Cencentration and Profitability

Given the general magnitudes of rates of return on sales and net worth for food retailers, there seems little doubt that scanner systems capable of generating before-tax net savings of between 1 percent and 1.5 percent of sales are a potentially attractive investment. This is especially true because potential soft savings have not been included in the computations.

However, the profitability of such investments will differ for large versus small stores, and for chain versus nonchain store operations. In particular:

(a) The minimum store volume requirement suggests that the scanner technology may favor the larger stores and larger chain operations. The latter already dominate food retailing and also historically have achieved rates of return which are very favorable relative to the remainder of the retail food industry. Such technology may thus increase concentration and further erode effective competition within the overall industry.

(b) Many industry observers have argued that smaller stores (i.e., those not of sufficient volume to support a scanner system investment profitably) do not compete with larger stores so much on a price basis as on the basis of convenience and service factors. However, potential

price reductions and improved customer service in scanning installations certainly could, at the margin, make the nonscanner installations less competitive.

(c) For those firms having stores of sufficient minimum volume to utilize computerized scanning systems effectively, it is possible that less efficient stores may have "more to gain". In this sense, competition may increase among larger stores, while at the same time declining between large and small stores.

(d) Hard savings themselves would appear to be achievable on a store-by-store basis, thus providing larger chain operations with little comparative advantage over independents. However, there may be some bias in the scanner technology to favor large chains at the expense of small chains and independents due to the soft savings potential. Soft savings in the areas of distribution and ordering, for example, may become more significant when more stores are involved.

(e) Requiring item pricing in scanner stores may give a special comparative advantage to larger chains. This is because such a requirement will reduce hard savings potential relative to soft savings potential. As discussed above, smaller chains and independents may have less access to soft savings than large chain operations. Such soft savings could involve improved distribution and inventory management, automatic ordering and reordering, more efficient storage and warehousing of products, and more sophisticated analysis of advertised sales performance, "new item" tracking and optimal shelf placements.

(f) Lastly, there is the concern that smaller chains and independents may have more difficulty raising the necessary financial capital for testing and installing scanner systems. This is particularly true because the fixed costs of exploring the scanner technology are greater per dollar of store sales as sales volume declines.

In summary, although scanner systems will inevitably benefit the large retail chain operations and probably increase overall industry concentration, such technology may increase the competitiveness within the class of minimum-sized stores on the basis of hard savings potential. However, one of the "costs" of item pricing requirements will be to provide larger retailing operations with relatively greater comparative advantages over other scanner installations. It will also raise the minimum store volume for financially feasible scanner system installation. These factors, plus evidence from industry sources that item pricing costs rise as a percent of sales as store size diminishes (due to certain fixed costs associated with pricing activities), add important dimensions of concern to the item pricing issue.

TABLE 5

NET PROFITS AFTER INCOME TAXES AS PERCENT OF STOCKHOLDERS' EQUITY FOR MANUFACTURING, FOOD MANUFACTURING, RETAILING AND FOOD RETAILING CORPORATIONS 1952 TO 1971[a]

Year	Manufacturing Corporations		Retailing Corporations			
	All	Food	All	All Retailing Excluding Food[b]	Food	Large Food Chains[c]
1952	8.1	6.1	6.6	6.4	8.0	N.A.
1953	8.1	7.0	5.5	5.0	8.9	10.0
1954	7.4	6.8	5.1	4.4	9.3	9.5
1955	9.9	8.1	6.6	6.2	9.4	9.9
1956	8.8	7.7	6.0	5.4	9.6	11.5
1957	7.7	7.0	5.1	4.4	9.5	11.2
1958	5.8	7.4	4.9	4.1	10.2	11.9
1959	7.8	7.6	6.0	5.6	8.6	9.6
1960	6.4	7.1	4.1	3.4	8.8	11.0
1961	6.3	7.2	4.2	3.7	7.7	9.9
1962	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1963	7.8	8.1	5.3	5.0	7.6	8.8
1964	8.6	8.3	7.2	6.8	9.8	9.5
1965	10.3	8.8	7.7	7.4	9.7	10.0
1966	10.9	9.7	8.2	8.1	8.5	9.4
1967	9.0	9.0	8.7	8.6	9.5	8.8
1968	8.5	8.0	8.8	8.7	9.1	8.3
1969	6.9	6.4	7.7	7.6	8.5	7.8
1970	5.0	6.8	6.5	6.2	8.2	8.2
1971	6.1	7.3	8.0	7.9	8.0	7.6
Average	7.9	7.6	6.4	6.0	8.9	9.6

a. Source: Federal Trade Commission Report No. R-6-15-23, Technical Staff Economic Report on Food Chain Profits, July 1975, p. 12, based upon Internal Revenue Service, Source Book, Statistics of Income, Corporation Income Tax Returns.
b. Estimated 1952-61.
c. Food store corporations with $50 million or more in assets.

TABLE 6

PROFITS AFTER INCOME TAXES AS A PERCENT OF STOCKHOLDERS' EQUITY, ALL MANUFACTURING AND FOOD MANUFACTURING COMPANIES, LARGE FOOD CHAINS AND A & P, 1952 TO 1974[a]

Year	All Manufacturing[b]	Food Manufacturing[b]	Large Food Chains			
			IRS[c,d]	FTC[e] 46 Chains	FTC[e] Excluding A & P	A & P
1952	10.3	7.6	n.a.	10.1	10.1	10.2
1953	10.5	8.1	10.0	11.3	11.6	10.1
1954	9.9	8.1	9.5	11.8	12.3	10.1
1955	12.6	8.9	9.9	12.1	12.6	10.5
1956	12.3	9.3	11.5	13.3	13.8	11.6
1957	11.0	8.8	11.2	14.1	14.4	13.2
1958	8.6	9.2	11.9	13.5	13.7	12.8
1959	10.4	9.6	9.6	12.6	12.9	11.5
1960	9.2	9.2	11.0	12.2	12.2	12.1
1961	8.8	9.4	9.9	11.2	11.2	11.2
1962	9.8	9.2	n.a.	10.8	10.7	11.2
1963	10.3	9.0	8.8	10.9	10.9	10.3
1964	11.6	10.1	9.5	11.0	11.6	9.0
1965	13.0	10.7	10.0	11.5	12.3	8.8
1966	13.4	11.3	9.4	11.4	12.1	9.2
1967	11.7	10.9	8.8	10.6	11.0	8.9
1968	12.1	10.8	8.3	10.9	11.9	7.1
1969	11.5	10.9	7.8	11.1	11.9	8.0
1970	9.3	10.8	8.2	10.5	11.2	7.4
1971	9.7	11.0	7.7	9.9	11.5	2.2
1972	10.6	11.2	n.a.	5.8	8.3	-8.6
1973	12.8	12.8	n.a.	8.0	9.0	2.0
1974	14.9	13.8	n.a.	4.8 est.	10.9	-35.4

a. Source: Federal Trade Commission Report No. R-6-15-23, Technical Staff Economic Report on Food Chain Profits, July 1975, pp. 36, 37. Based on Federal Trade Commission, Quarterly Financial Report for Manufacturing Corporations.

b. Federal Trade Commission, Quarterly Financial Report for Manufacturing Corporations.

c. Food store companies with $50 million or more in assets as reported in the Internal Revenue Service Source Book, Statistics of Income, Corporate Income Tax Returns. In 1965 there were 22 chains in this series and in 1971 there were 36.

d. Internal Revenue Service profit rates are lower than company annual report profit rates because of different reporting bases. In 1963 the Internal Revenue Service started to ask corporations for a reconciliation of income as reported in company annual reports with income as reported to the IRS on tax returns. For selected years the IRS has published comparisons for industrial groups in Statistics of Income, Corporation Income Tax Returns. For all food store companies, IRS profits were 94 percent of annual report profits in 1963, 76 percent in 1975, and 86 percent in 1969. Nothing has been published since 1969.

e. Compiled from Moody's Industrial Manual, company annual reports, and other public sources. Through 1964 the series contained only 30 chains. Individual company data for these 30 chains are shown in Appendix Table 64, page 364, of the Federal Trade Commission Staff Economic Report on the Structure and Competitive Behavior of Food Retailing (1966). After 1964, 46 chains are included in the series.

TABLE 7

NET PROFITS AFTER INCOME TAXES AS PERCENT OF STOCKHOLDERS' EQUITY FOR LEADING FOOD CHAINS, 1965 TO 1974 (DATA FOR FISCAL YEARS ENDING ON OR BEFORE JUNE 30 ARE APPLICABLE TO THE PRIOR YEAR)[a]

Company and 1973 Sales Size	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
$1 Billion and Over										
Great A & P	8.8	9.2	8.9	7.1	8.0	7.4	2.2	-8.6	2.0	-35.4
Kroger	12.8	11.3	9.6	12.1	12.5	12.0	9.2	5.2	7.6	10.8
Lucky	22.6	22.6	26.4	26.7	26.8	23.0	22.7	19.7	18.9	20.5
Safeway	13.9	15.7	12.6	12.8	11.9	13.9	14.7	15.0	13.1	11.4
Southland	18.0	18.3	20.4	12.1	13.1	13.2	13.0	10.5	10.9	12.2
Weighted Average[b]	11.9	11.9	11.1	11.0	11.2	11.0	10.1	6.8	9.5	n.a.
$500 to $999 Million										
Arden-Mayfair	13.5	10.2	1.0	6.6	5.2	-7.4	5.0	-2.6	-82.6	9.9
First National Stores	2.5	-0.8	-7.8	1.4	5.6	4.2	-0.9	0.04	-22.7	n.a.
Giant Food	14.0	11.5	13.8	14.3	15.6	9.8	16.9	12.4	12.3	n.a.
National Tea	8.9	9.2	8.9	6.0	8.0	6.1	7.0	-38.7	-19.8	-3.5
Weighted Average[c]	9.8	9.0	7.2	9.7	10.8	8.4	10.3	0.8	1.3	n.a.
Under $500 Million										
Borman's	21.2	19.7	13.5	13.5	13.6	3.7	-15.7	4.2	-2.1	-15.1
Foodarama Supermarket	25.9	25.2	23.3	20.1	14.4	13.1	8.2	-70.4	5.1	25.6
Loblaw	5.9	5.0	3.2	7.0	7.4	7.9	7.6	-1.8	-23.0	0.8
Marsh Supermarkets	11.9	12.5	13.4	13.2	12.4	6.2	9.2	8.9	12.3	n.a.
Penn Fruit	2.5	3.4	5.2	7.9	12.9	6.8	8.7	-5.6	-15.4	-16.0
Thorofare	7.0	5.9	4.3	7.8	9.0	8.0	8.4	3.2	-21.4	0.04
Weis Markets	21.1	21.7	21.1	20.1	18.4	19.0	18.4	16.6	15.8	17.4
Weighted Average[d]	11.2	11.5	10.9	11.8	11.1	9.8	8.5	5.8	5.6	n.a.
Total Weighted Average	11.5	11.4	10.6	10.9	11.1	10.5	9.9	5.8	8.0	n.a.

a. Source: Federal Trade Commission Report No. R-6-15-23, Technical Staff Economic Report on Food Chain Profits, July 1975, pp. 38, 39, based on Company Annual Reports, Moody's Industrial Manual, and other published sources.
b. Average includes eight additional chains.
c. Average includes five additional chains.
d. Average includes 17 additional chains.

CHAPTER III

EMPLOYMENT IMPLICATIONS OF AUTOMATED CHECKSTAND SYSTEMS

Food chain survey data published annually in Operating Results of Food Chains (New York State College of Agriculture and Sciences, Cornell University) indicates that actual store labor costs (i.e., payroll plus employee benefits, excluding labor costs for warehousing, transportation, merchandising and general administration) comprise about 9 percent to slightly over 10 percent of sales.[28] Given this, the potential for before-tax net hard savings of 1 percent to 1.5 percent of sales when scanner systems replace conventional mechanical checkout systems represents some 10 percent to 17 percent of store payroll and employee benefits outlays, or between 7 percent and 13 percent in the absence of item price elimination. This potential clearly encourages the installation of the scanner technology to reduce operating costs via employment reduction as at least a partial use of system benefits. The actual employment reduction itself will depend upon a great many factors. These factors include stores' sales volumes, wage rates, use of full-time versus part-time labor, productivity improvement, ability to "capture" checkstand productivity gains, desire to use increased productivity to improve customer services such as through shorter waiting lines, item pricing policies, attitudes toward layoffs, early retirement and attrition, and the type of checkout system used prior to scanners. In addition, the production, installation and maintenance of scanner equipment itself generates employment effects. We discuss the employment issue below by

considering: (A) the general employment characteristics of California-area scanner installations; (B) potential employment reductions in scanner installations resulting from hard savings; and (C) the induced employment potential of scanner technology for the California equipment producing and electronics industries.

A. Employment Characteristics of California-Area Scanner Installations

Data from survey respondents indicated that full-time store employment ranged from 0.28 to 0.34 persons per $1,000 weekly sales volume, with the ratio declining with increasing store size as scale economies emerge and fixed personnel needs are spread over higher sales volumes. When part-time employment is included, these employment ratios ranged from 0.34 to 0.38, assuming part-time employment to average half-time. Considerable spread, however, was reported in the percentage of employment and hours accounted for by part-time employment. Employee ages were relatively young, average full-time employee age ranging from 28 to 35, with 19 to 25 for part-time workers. Males tended to account for 65 percent to 70 percent of full-time employment, and from 55 percent to 60 percent of part-time employment. Although labor turnover differs considerably on a store-by-store basis, one respondent indicated that turnover can exceed 100 percent annually. It thus seems probable that any employment reductions caused by scanner implementation could occur through attrition as opposed to layoffs.

Scanner store unionization levels ranged from 90 percent to 100 percent, generally excluding only managerial personnel. Compensation ranged

from slightly over $5 per hour to nearly $9 per hour (including fringes), depending on store location and employee skill levels.[29]

California union contract agreements generally do not actually prohibit employee layoffs due to automation. However, they do provide that employers intending to install automated checkout systems which might result in the removal of price marking and thus employment changes, shall notify unions within 60 to 90 days as to the nature of such changes and technology. Subsequent to such notification, provision is made for negotiations with respect to pay rates for any new jobs created, job transfers, and/or the disposition of displaced workers, subject to final and binding arbitration. Northern and southern California contract language related to automation does state that it is not the intent that such negotiations or arbitration will in any way jeopardize the potential efficiencies and increased productivity to be gained by the installation of automated checkout systems.

B. Potential Employment Reductions From Hard Savings

Individual stores. An estimate of potential employment reductions from hard savings based on the 1.0 percent to 1.5 percent before-tax savings range, and representative hourly labor costs, would yield potential employment savings in the range of between three and somewhat over four employees for an $80,000 per week volume store and between five and slightly over seven employees for a $140,000 per week store. These figures also appear generally consistent with the procedure of applying the 10 percent to 17 percent labor savings (see page 44) of our survey questionnaire data on store employment. The latter procedure yields approximate

potential employment reductions of 3.0 to 5.0 for an $80,000 per week volume store and 4.5 to 7.5 for a $140,000 per week volume store. Remembering that such figures represent potential labor savings, they also appear generally consistent with Ralph's reported observed reduction in front-end labor costs of between 10 percent and 15 percent.

It is important to remember that stores may or may not actually realize such potential employment effects, whether because of inability to actually capture potential savings, or decisions to apply savings to such areas as improved customer service. For example, several survey respondents who indicated the expectation of reduced labor hours also planned to distribute savings between profits and lower food prices and improved service. The latter generally requires retention of some portion of the potential labor reduction. It is also the case that certain scanner installations may generate offsetting employment increases, at least in the near term. For example, shelf marking costs may also rise depending on store labeling policies prior to scanner installation.

We have noted previously that savings due to item pricing elimination could comprise perhaps one-quarter to one-third of hard savings potential. Based upon the mid-point of this range, potential employee reductions attributable to item pricing for an individual store would be in the vicinity of 0.9 to 1.2 full-time positions for stores in the $80,000 per week volume range ($4 million yearly), and 1.5 to 2.0 full-time positions for stores in the $140,000 per week volume range ($7 million yearly). These estimates appear consistent with Giant Foods' weekly use of 70 to 75 labor hours for initial pricing, remarking and management review of marking in

a $140,000 per week store. They are also consistent with Safeway's estimated 30 to 35 hours for an $80,000 per week volume store, although somewhat exceeding Ralph's estimated 30 hours in a $150,000 per week volume store. Assuming the above ranges for potential item pricing employment effects, item pricing requirements would imply total net potential employment reductions in the vicinity of 2.1 to 2.8 for $4 million yearly sales volume and 3.5 to 5.0 for $7 million volume. Table 8 summarizes these estimates.

In offering such estimates, we stress that such "potential" employment reductions may only materialize in part or, possibly, not at all. In addition, employment adjustments may occur through attrition, early retirements, layoffs, shifting of full-time workers to part-time work, and elimination or reduction of part-time workers. Attrition is a likely alternative, given the historically high rate of labor turnover among retail food store employees. The distinction between part-time and full-time employment effects is an important one, since part-time workers are often not household heads. While the loss of part-time employment might reduce concern about the income status of "primary" jobholders, this does raise the question of whether employment reductions will further intensify the already serious teenage unemployment problem. To the extent that such part-time workers (including baggers) receive wages lower than standard checker/cashier wages, the above employment effects are understated.[30] That is, the figures represent full-time employment equivalents for checkers and cashiers.

Statewide. To determine the potential range of employment reductions from hard scanner savings on a statewide basis, information about the number

TABLE 8

ESTIMATED POTENTIAL EMPLOYMENT REDUCTION ASSOCIATED WITH SCANNER CHECKOUT SYSTEMS FOR SELECTED STORE SIZES

Employment Effect	Full-Time Employee Equivalents	
	$80,000/week Store Volume	$140,000/week Store Volume
Total potential reduction assuming item pricing elimination	3.0 - 4.0	5.0 - 7.0
Portion of total potential reductions due to item pricing elimination	0.9 - 1.2	1.5 - 2.0
Total potential reduction assuming no elimination of item pricing	2.1 - 2.8	3.5 - 5.0

and size distribution of California supermarkets is needed. This is because individual store employment reductions depend both upon (1) whether the store satisfies the minimum store size constraint for profitable scanner operation (given chosen pay back periods and/or return rates), and (2) the actual store volume above and beyond the minimum size required.

Unfortunately, the exact distribution of store sizes for California is not accurately known. However, data provided to us by the California Retailers Association (see Table 4) does give for 1974 the number of supermarkets and average sales figures for the volume ranges of $2 to $4 million sales yearly and over $4 million sales yearly:

Supermarket Sales Range (annually)	Number of Stores	Average Sales Per Store Per Year
Over $4 Million	685	$5.84 Million
$2 to $4 Million	1,471	$3.09 Million

Assuming that roughly one-half of the stores with $2 to $4 million per year volume have volumes in excess of $3 million (i.e., 700 to 800 stores), these data suggest some 1,350 to 1,500 stores with volumes in excess of $3 million, and 2,000 to 2,200 stores with volumes exceeding $2 million.

Based on Chapter II's analysis of minimum store volume requirements, some 2,000 to 2,200 stores would meet the $2 million minimum volume requirement for scanner system implementation if item pricing elimination is allowed and practiced, or some 1,350 to 1,500 stores if item pricing is required and/or maintained.

Our statewide employment estimating procedure is to extrapolate the

earlier potential employment reduction estimates for different-sized stores (see Table 8) to the measured average sales volume per store of $5.84 million for stores with over $4 million volume, approximately $2.6 million average store sales volume for $2 to $3 million volume stores; and approximately $3.6 million average store sales volume for $3 to $4 million volume stores.[31] These individual store employment ranges, when applied to the estimated number of stores in each volume category, yield potential employment reductions assuming item pricing elimination of approximately 3,100 - 4,800 for $2 to $4 million volume stores, 2,800 to 3,850 for stores with volumes exceeding $4 million, or a total of 5,900 to 8,650.[32]

If item pricing is chosen or mandated, these employment reductions decline both because some stores no longer meet minimum necessary size to justify scanner investment, and those that do forgo some portion of hard savings potential. The appropriate computations show that item pricing will reduce potential employment losses to a range of 3,300 to 4,700.[33] That is, item pricing requirements could possibly raise employment by 2,600 to 3,950 full-time equivalent positions above that which might occur in their absence. Table 9 summarizes these statewide employment impacts.

These estimates must be interpreted cautiously in light of the qualifications and assumptions surrounding them. For instance, they may understate the potential for employment reduction to the extent (a) that firms will recognize soft savings potential in making investment decisions (thereby reducing the minimum store volume requirement), (b) that scanner system purchase and installation costs decline in the near future, (c) that scanner investment decisions are based on pay back

TABLE 9

POTENTIAL STATEWIDE EMPLOYMENT EFFECTS FROM SCANNER SYSTEM IMPLEMENTATION[a]

	Full-Time Employee Equivalents
A. Employment Reductions Per Average Store, Assuming Item Price Elimination	
(1) Store volume in excess of $4 million/year	4.1 - 5.6
(2) Store volume between $3 to $4 million/year	2.6 - 3.6
(3) Store volume between $2 to $3 million/year	1.9 - 2.6
B. Statewide Potential Employment Reductions	
(1) Assuming item pricing elimination	5,900 - 8,650
(2) Assuming continuation of item pricing	3,300 - 4,700
(3) Loss in potential employment reduction due to item pricing requirement	2,600 - 3,950

a. Figures based upon preceding text discussion.

periods and return rates consistent with the probable economic life spans of scanner systems as opposed to shorter-term pay back period criteria, (d) that food price increases and store expansions and creations have significantly increased the number of stores with minimum volume requirements above the 1974 estimates, (e) that future food price increases will, relative to wage trends and scanner costs, significantly increase the number of stores with minimum volume requirements, (f) that part-time workers with lower hourly wage rates than full-time workers will bear the brunt of any employment reductions, (g) that investment outlays will produce certain tax advantages and (h) that the new technology will allow less skilled labor to be substituted for higher skilled labor, given the scanner system emphasis away from manual key entry and toward rapid bagging. On the other hand, potential employment reductions are overstated to the extent that point-of-sale equipment in use has already improved checkstand productivity over conventional mechanical registers, that productivity improvements are not totally channeled into employment reductions and that shelf marking costs might rise in the absence of item pricing. Lastly, the estimates assume that all stores with the noted minimum store volumes do in fact implement scanner installations and fully achieve potential productivity gains and savings. In reality, both conditions would take time be be realized.

C. Induced Employment Potential in California Equipment and Electronics Industries

Spectra-Physics, a manufacturer of various laser scanning equipment for NCR, National Semiconductor and IBM, has made available to us the results of a study commissioned to determine the potential effects of item

pricing legislation in California. Appendix A presents the results of this study, including its assumptions, methodology and limitations. This subject is of special interest given California's major electronics industry. Western Electronics Manufacturing Association consultants have indicated that California and Ohio make most of the scanner and P.O.S. equipment, and thus will bear the brunt of any manufacturing employment losses related to item pricing requirements.

According to these results, the production and installation of scanner systems replacing conventional mechanical register systems generates 3.09 one-time California jobs for each California store installation and 1.54 one-time California jobs for each out-of-state store installation. In addition, 0.63 continuing jobs per store installation in California result from the need for equipment maintenance and service, and system programing operations and analysis. Based upon our estimates of California stores potentially installing scanners, one-time potential manufacturing jobs in the ranges of 6,200 to 6,800 (assuming item price removal) and 4,100 to 4,600 (assuming item pricing retention) are suggested. Continuing jobs would total 1,250 to 1,400 assuming item price removal, and 850 to 950 assuming mandatory item pricing.

In addition, there exists the unknown but probably very significant number of one-time manufacturing jobs for out-of-state scanner system store installations.

These figures are subject to overstatement and understatement for the same reasons applicable to store employment reduction estimates. We particularly note that stores installing scanners may already have point-

of-sale equipment, while stores not purchasing scanners may choose to install point-of-sale equipment.[34] In addition, these figures are not adjusted for the decline in employment for maintaining and servicing conventional registers. While we have not attempted to estimate the latter, we note that Giant Foods and IBM have estimated such costs at $6 per month per register, or perhaps only 10 hours per month per store.

FOOTNOTES

1. These associations included the Cooperative Food Distributors Association, the Super Market Institute, the National Association of Retail Grocers of the United States (NARGUS), the Grocery Manufacturers of America (GMA), the National Association of Food Chains, and the National American Wholesale Grocers' Association (NAWGA).

2. The Battelle Memorial Institute, located in Columbus, Ohio, is a nonprofit research institute active in such areas as technical economics, information analysis, innovative studies and development of new products and processes. The institute is supported by endowments and research contracts with both private industry and government. The Battelle staff of 5,600 recorded over $100 million of contract research in 1972.

3. In addition, the manufacturers and distributors of food service merchandise are in the process of identifying shipping containers by a 10-digit UPC case code, identical to the 10-digit UPC consumer package code for a manufacturer except where a case contains a variety of consumer packages or where consumer packages are packed in different multiples. For these latter exceptions, unique case codes are being developed. Universal Product Code case coding will appear on invoices and shipping documents, assisting in accelerating order processing and improving delivery performance by suppliers.

4. Labels and containers, once designed bearing UPC information, can be printed using current technology without significant cost increases. In addition, symbol film masters cost only about $20 to $25 for each individual type of item. For firms having numerous item types, of course, film master costs could become more important.

   For the entire industry the initial costs of symbol source marking (although debated) have been estimated at $30 million to in excess of $50 million when research and development costs are included. This does not include the $5 million in actual "out-of-pocket" expenses to the food manufacturing industry for the development budget ($2.5 million), code/symbol administration expenses ($1.5 million), and other costs. These are relatively minor amounts when (1) properly amortized and (2) compared with projected overall UPC cost savings.

5. Smaller sales volume can mean higher average symbol marking conversion costs per unit of sales for smaller relative to larger manufacturers, and even if such average costs are comparable, noncompetitive elements in the food industry may slow the full translation of such costs into product prices so as to "squeeze" certain marginally profitable smaller manufacturers.

   Some manufacturers, of course, are protected because their products face highly inelastic consumer demands, are "specialty" commodities,

enjoy considerable product differentiation or brand loyalty, or are low-movement but high-priced items for which in-store symbol marking costs are low relative to sales prices. The Ad Hoc Committee's position has been that costs to small manufacturers are generally relatively insignificant.

The possibility of problems for certain small manufacturers may be of special interest given the high level of market concentration in the food manufacturing industry. For a great many individual product categories, top four-firm concentration levels are well in excess of 50 percent. According to a 1966 FTC report, the largest 50 food manufacturing firms accounted for some 37 percent of industry value added, 50 percent of assets and 60 percent of profits. Similar figures for the largest 100 firms were about 46 percent, 60 percent and over 70 percent. Moreover, 32,000 food manufacturers were in existence in 1966 (versus 40,000 in 1947) and, since that time, the number of food manufacturing firms has declined to an estimated 27,000 firms in 1972. Increased concentration and reduction in firm numbers in the post-war period have been the result of increased activity by conglomerates, closing of smaller firms, and extensive merger activity. For example, between 1950 and the mid-1960's alone, the top 50 food manufacturing firms acquired nearly 1,000 companies (many of which were themselves large food processors).

6. The term "point-of-sale" equipment is generally used to characterize this automated checkout equipment. There exist many equipment varieties ranging from single electronic cash registers capable of capturing data on a cassette tape to a system with hundreds of cash register terminals connected to computers. This equipment is expensive. For example, a department store's initial capital investment outlay for an 80 terminal system with in-store computer facilities can reach $400,000. By the end of 1975, Fortune Magazine estimated that all retailers combined had installed some 125,000 point-of-sale units worth $420 million, with projections for 1984 of $10 billion. The competition to supply this equipment has proved intense, with such firms as IBM, NCR, Data General, Sperry Univac, Litton's Sweda International Division, National Semiconductor, General Instruments, Singer, MSI Data Corporation, and ESIS (Bunker Ramo) having been among the contestants. NCR (and to a lesser degree, National Semiconductor) has been particularly active, estimated to have installed as much as one-half of all point-of-sale equipment in place as of late 1975 and focusing on electronic cash registers (with some programing capabilities.) In contrast, IBM has specialized in systems integrated with computers (including scanner systems).

7. Approximately 400 terminals were equipped with scanners. Not all of the 26,000 terminals, however, were converted to computer systems.

8. Many factors will be operating to further encourage conversion to scanning systems in the future, including continually rising union wage demands, progressive increases in the percentage of UPC symbol source marking by food manufacturers, and experimentation to capture potential system benefits from improved inventory management, ordering and warehousing.

9. Although IBM has been dominant in the area of scanner installations, NCR accounted for an estimated 60 percent of point-of-sale terminal installations in early 1976 (though many were without scanners). Examples of equipment conveniently upgradeable to scanner systems include the NCR 255 point-of-sale terminal unit. Although upgrading such equipment to scanner systems may require certain checkstand structural modifications and computer software and programing, the major step appears to be the initial substitution of units such as an NCR 255 for old, conventional mechanical registers.

10. Considerable competition has already become apparent between scanning-producing firms such as NCR, IBM, Data General, Sperry Univac, National Semiconductor and Sweda. National Semiconductor, for example, recently offered an eight-lane scanner system for roughly $80,000 or over 20 percent below the usual costs associated with IBM and NCR. The result of price competition in this potentially lucrative checkout equipment market may well mirror the experience of large price declines in other electronics-related markets such as calculators, especially as research and development costs can be spread over larger sales volumes. These factors may provide powerful offsets in the future to any loss in potential scanner system benefits associated with legislatively-mandated or self-imposed industry item pricing policies.

11. In December 1975, Progressive Grocer magazine reported a price range for 10-lane automated scanner systems of roughly $100,000 to $150,000. Eight lane systems ranged as low as approximately $85,000.

12. Some inter-store cost differences may be explained by special problems during scanner conversion periods, as well as differing interest in developing scanner-related computer software techniques.

13. Some observers have suggested a lower 20 percent share of savings attributable to item pricing. However, item pricing savings are "automatic" in the sense that they require no checkstand productivity improvement, whereas the estimates of potential productivity improvement seem more prone to error. We therefore focus primarily on the one-third to one-fourth savings shares assumptions.

14. Although some major manufacturers of grocery items still do not source mark their entire lines, primarily smaller manufacturers appear to be involved.

15. For a discussion of these approaches, see James C. Van Horne, Fundamentals of Financial Management (Prentice-Hall, 1971), pp. 160-175.

16. In addition to differences in opinion as to which general decision-making approach to use, consensus seems lacking concerning the use of discounting techniques, the use of before-tax or after-tax estimates (including consideration of investment tax credits), the treatment of maintenance and operating costs, the focus on "gross" versus "net" dollar quantities, and the recognition that UPC-related savings may be unequal over time.

17. One California chain informed us that a five year pay back period seemed most reasonable; however, their reference appeared to reflect an after-tax dollar inflow which, of course, would correspond to a shorter period based upon before-tax inflows.

18. Van Horne (Ibid, pp. 161-162) defines the pay back period as the ratio of the initial fixed investment over the annual cash inflows for the recovery period. If the pay back period calculated is less than some maximum acceptable pay back period, the proposal is accepted; if not, it is rejected. The major shortcoming of the pay back method is that it fails to consider cash flows after the pay back period; consequently, it cannot be regarded as a measure of profitability and, in fact, can be quite deceptive in this regard. The magnitude and timing of cash flows during the pay back period are also not considered.

19. In addition, considerable interstore differences in potential system profitability may exist depending upon the levels of pre-installation versus post-installation efficiency (including type of registers used and labor scheduling policies), the percentage of store "throughput" carrying source-marked UPC labels, pre-installation versus post-installation shelf-labeling policies and price remarking policies, the interrelationship between labor costs and food prices, and policies concerning item pricing.

20. We have been told by representatives of certain California chains that "everyone knows" that considerable soft savings potential exists. However, such savings potential appears generally viewed as being unacceptable for justifying an investment outlay.

21. Assuming both the higher 1.5 percent savings figure and a more conservative item pricing savings share of 20 percent of hard savings, the lower limits of the minimum store volume ranges are only nominally reduced. For example, using a two and one-half year pay back criteria, this limit becomes $5.0 million/year for the $150,000 installation ($96,000 weekly).

22. Scanner equipment life spans are not precisely known at this time (including the extent to which "effective" life spans may be less than "physical" life spans due to future technological development in the automated checkout area). However, a life span equivalent to the 8 to 10 year period often used for conventional mechanical equipment does not appear unreasonable.

23. Such estimated return rates indicate minimum rates which apply, at the margin, to stores with sales volumes sufficient to qualify for specified pay back periods, and for which potential savings are in fact "realized" as incoming cash flow. Rates of return could be higher for stores having greater than minimum sales volumes. Dollar inflows necessary to satisfy specific pay back period requirements are assumed to represent inflows net of scanner operating and maintenance costs.

24. Evidence exists of the relatively minor effects on consumer food prices which result from fairly significant reductions in potential or actual profit levels of food retailers (a relationship caused by the high turnover of grocery items). In early 1976 in southern California, for example, Alpha Beta, Lucky, Safeway, and Ralphs (among others) engaged in a push for "low prices", led by Alpha Beta. Some industry analysts noted that, without advertising campaigns and the coincidental decline in wholesale food prices, customers would have hardly noticed the average 1 percent decline in retail prices which, in contrast, reportedly reduced retail profits considerably.

25. Individual leaders in food retailing included Safeway (with some 2,300 stores, over 25 distribution centers, 40 warehouses, and $6.8 billion in sales), A & P ($6.8 billion in sales), Kroger ($4.2 billion in sales) and Lucky ($2.3 billion in sales).

26. Merger activity has significantly contributed to reducing numbers of stores and increasing concentration in food retailing since the mid-1950's, with large chains absorbing both smaller chains and individual stores. Food and grocery stores, estimated at 378,000 in 1948, fell to 245,000 by 1963 and are currently estimated in the 200,000 range. Most of the decrease in store numbers appears to have been among single store companies. Although some purchased firms were experiencing unprofitable performance, many were not. The Federal Trade Commission (FTC) for example, has noted that many local chains purchased by such organizations as National Tea, Kroger, Winn-Dixie, Mayfair and Food Fair had been "effective competitors" prior to merger.

27. Federal Trade Commission studies, for example, have shown that a widening gap occurred after 1963 between the more nearly level profit rates for large chains excluding A & P versus the declining rates for large chains including A & P. Beginning in 1971, A & P profit performance deteriorated considerably (2.2 percent in 1971, -8.6 percent in 1972, 2.0 percent in 1973, and -35.4 percent in 1974), primarily due to the WEO discount program launched in early 1972 and an eventual decision to set up a reserve fund in 1974 to cover expenses of a major store closing program in 1975.

    The FTC notes that 1972 was a relatively low profit year primarily because of A & P's WEO discount pricing program, which lowered prices and profits of most food chains operating in the eastern half of the United States. However, the average profit rate of food chains operating

in other areas tended to be comparable to that earned for many years. From 1972 to 1974, large food chain profits dramatically rose, returning to their moderately high levels relative to other industries since the mid 1950's. This is particularly true when adjustments are made for the switch from FIFO to LIFO inventory accounting and the large losses sustained by A & P. According to data from the National Association of Food Chains and Cornell University, gross margins (the difference between the purchase value and the retail value of items chains sell) of food chains have remained relatively constant since the late 1950's (approximately 21 percent to 22 percent of sales), with before-tax profits averaging about 10 percent of gross margins over the period. Recent computations by First National Bank of New York, however, suggest some evidence that the 1974 and 1975 rates of return on net worth declined for food chains in the aggregate relative to the performance of trade, services, manufacturing and other types of retailing. Again, some of this decline may simply reflect the process of shifting from FIFO to LIFO treatment of inventory accounting. Safeway's 1974 rate of return on equity, for instance, equaled 11.4 percent under LIFO, considerably below the 16.5 percent which would have existed under FIFO. Given that some 20 percent of all food chains made such an inventory change in 1974, the FTC has estimated that large chain profits figures in the aggregate fell by 1.5 percentage points, or about 9 percent.

A May 1976 corporate profit performance survey for early 1976 by Business Week indicated a composite return on common equity of 14.4 percent for food retailers compared to 12.0 percent for large nonfood retailers (department, discount, mail order, variety and specialty stores) and, for all types of manufacturing and nonmanufacturing industries, 13.0 percent.

28. Food chain labor costs (payroll plus employee benefits) were found to comprise roughly 12½ percent to 15 percent of sales, and 60 percent to 70 percent of operating costs and gross margins. Actual store labor costs were 40 to 50 percent operating costs, and over 70 percent of total food chain labor costs. See Operating Results of Food Chains 1975-76, New York State College of Agricultural and Life Sciences, Cornell University.

29. Fringe benefits generally include pay for vacations, sickness, and holidays; FICA taxes; federal and state unemployment taxes; group insurance premiums; workers' compensation charges; and payments for union pensions and welfare benefits. Such fringe benefits may often exceed 25 percent of basic wage rate levels.

30. For example, one store noted that part-time workers do not qualify for fringe benefits (i.e., medical, vacation, union pension. . .) if they work less than 16 hours per week, and that they receive under $4/hour versus the average $8/hour paid to clerks.

31. Estimated sales ranges for $2 to $3 million and $3 to $4 million volume stores reflect those ranges resulting from jointly considering

(a) the range of 700 to 800 $3 to $4 million volume stores (b) the implied average volumes for $3 to $4 million stores assuming $2.5 million average volume for $2 to $3 million volume stores and (c) the implied average volumes for $2 to $3 million stores assuming $3.5 million average volume for $3 to $4 million volume store ranges.

Extrapolations are based upon a linear relationship between store size and employment effects. Upper and lower range bounds reflect those resulting from considering all combinations of the 700 to 800 range bounds for stores with sales volumes of $3 to $4, in conjunction with the various average volume ranges described above.

32. Statewide employment ranges reflect bounds implied by all combinations of ranges of store numbers by volume classification and ranges of average sales volumes within volume classifications. See text footnote 31.

33. Of the 3,300 to 4,700 potential employment reductions, 1,300 to 2,000 are produced by stores in the $3 to $4 million/year volume classification and 2,000 to 2,700 by stores in the volume classification exceeding $4 million/year.

34. In contrast, the above manufacturing job estimates assume the replacement of conventional mechanical checkout systems by complete scanner operations, with no intermediate use of nonscanner point-of-sale equipment.

APPENDIX A

EMPLOYMENT IMPACTS IN EQUIPMENT MANUFACTURING INDUSTRIES

Spectra-Physics, a manufacturer of various laser scanning equipment for NCR, National Semiconductor and IBM, commissioned a study to determine the potential effect of item pricing legislation on employment in California. The data was gathered from members of the Western Electronics Manufacturers Association (WEMA) and has since been used by WEMA spokesmen. The procedure used was to derive estimates of the personnel-years per store associated with the production of the automated checkout system and its components. Continuing jobs in maintenance and computer programing were added to these estimates and then applied to unit sales projections for three legislative scenarios.

Table 1 summarizes the derivation of these personnel-year estimates.

TABLE 1

Type of Manufacturer or Service		Sales Value/ Unit[a]	Typical Yearly Sales of Employee	Employees/ Unit Sold
System without Scanner		$60,000	$50,000	1.20
Suppliers:	Integrated Circuits	5,000	50,000	0.10
	Subcontract Labor	1,200	8,000	0.15
	Purchased Parts	10,000	30,000	0.33
Scanner without Laser		30,000	30,000	1.00
Suppliers:	Integrated Circuits	2,000	50,000	0.04
	Subcontract Labor and Purchased Parts	10,000	30,000	0.33

TABLE 1 (cont'd)

Type of Manufacturer or Service	Sales Value/ Unit[a]	Typical Yearly Sales of Employee	Employees/ Unit Sold
Laser	$ 1,500	$30,000	0.05
Checkstand	15,000	20,000	0.75
Other Printers, Testers and Scales	5,000	30,000	0.16
Labor Portion of Purchased Capital Goods	4,500	30,000	0.15
Craft Labor for Installation	8,000	20,000	0.40
Total Manufacturing Employment/ Unit			4.66
Continuing Jobs:			
Equipment Maintenance and Service			.33
Supermarket Jobs in System Programing, Operation and Analysis			.30

a. "Unit" is defined as a typical potential purchaser of the store system, having 10 checkout lanes.

The information presented in the first two columns, labeled "sales value per unit" and "typical yearly sales per employee", was developed by the manufacturer according to generalized industry statistics and internal information. The third column, "employees per unit sold", is the result of dividing the first column by the second column. Continuing jobs in equipment maintenance and in system programing are estimated on the basis of industry experience and manufacturers' knowledge.

This method of arriving at the labor content of various manufactured products is subject to qualification on several accounts. First, the use

of typical yearly sales per employee must be questioned. This figure includes in its base all employees, as opposed to direct employment in manufacturing and supervision of the products. Some of that employment may not be sensitive to sales of automated checkout systems. The result is an overestimation of "employees per unit sold" to the extent that included jobs are not production related.

Second, the concept of marginal employment is somewhat lacking. The question being faced by the supermarket industry today is whether to buy point-of-sale systems with or without the scanning capability. Item pricing legislation would apparently have the effect of reducing the number of stores choosing to buy the scanning capability. Therefore, the focus should be on marginal employment resulting from production of the scanning capability.

For example, production of the "system without scanner" refers to all parts of the automated checkout system except the scanner. In other words, it includes the electronic terminals and all the data processing equipment. Some portion of that data processing equipment and all of the terminals will be purchased regardless of whether the scanning capability is also purchased. That production employment is, therefore, not dependent on the fate of the scanning system.

Table 2 presents the estimates of California's share of the jobs involved in production of automated checkout system. Note that for complete systems purchased by stores operating within California, the estimate of one-time jobs per store is higher than for systems purchased for out-of-state installation. This results largely from the practice of using local construction labor to build the checkstands and for installation of the system.

TABLE 2[a]

Product	Labor Content (Personnel/ Years)	Units Purchased by California Stores		Units Purchased by Out-of-State Stores	
One-Time Manufacturing Jobs		% of Units Made in California	California Jobs/Year	% of Units Made in California	California Jobs/Year
System Without Scanner	1.2	40%	0.48	15%	0.18
Suppliers: Integrated Circuits	0.10	90%	0.09	90%	0.09
Subcontract Labor	0.15	40%	0.06	15%	0.02
Purchased Parts	0.33	40%	0.13	15%	0.05
Scanner Without Laser	1.00	80%	0.80	80%	0.80
Suppliers: Integrated Circuits	0.04	90%	0.04	90%	0.04
Subcontract Labor and Purchased Parts	0.33	80%	0.26	80%	0.26
Laser	0.05	90%	0.05	90%	0.05
Checkstand	0.75	90%	0.67	--	--
Printers, Testers, Sales	0.16	10%	0.02	10%	0.02
Labor Portion of Purchased Capital Goods	0.15	60%	0.09	20%	0.03
System Installation	0.40	100%	0.40	--	--
Total One-Time Jobs	4.66		3.09		1.54
Continuing Jobs					
Equipment Maintenance and Service	0.33	100%	0.33	--	--
System Programing, Operations and Analysis	0.30	100%	0.30	--	--
Total Continuing Jobs	0.63		0.63		0.00

a. Estimates do not include job losses for maintenance of mechanical registers.

PART II

CONSUMER ATTITUDES ON COMPUTERIZED CHECKOUT SYSTEMS AND ITEM PRICING

Prepared by the

Assembly Office of Research

not enforceable and thus compliance is voluntary.

An analysis of each of the surveys is beyond the scope and mandate of HR 36, hence a precise assessment of the credibility of each survey will not be made. In some of the surveys, however, there are certain inadequacies which bear examination. For example, the shopper sample used by the Field poll is not a purely random sample. The survey, which was conducted by telephone, consists only of those GEMCO card-holders with listed telephone numbers, thus automatically excluding GEMCO members with unlisted telephone numbers and members not having telephones. Another example of inconclusive findings is present in the New York Legislature survey. Question number 7, "Have you been doing more of your shopping here since the installation of UPC?", may lead the reader to a wrong conclusion. For instance, do the 84.8% respondents who answered "no" shop less at that store because of the UPC installation, or do their answers indicate that their shopping habits have not been changed by the UPC installation? Also, with the exception of the Field poll, one of the more substantive concerns, which is a shopper's willingness to pay the costs of item pricing, is not addressed. The Field survey quizzes shoppers on their willingness to accept the elimination of item price information if it means holding down prices by applying item price removal savings to the increasing cost of food.

In addition, each of the surveys had a preset goal and remained within the boundaries of that objective. Therefore, some of the issues and concerns HR 36 raises are not addressed in their entirety by any one survey, but are covered by all the surveys collectively. For

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In addition, each of the surveys had a preset goal and remained within the boundaries of that objective. Therefore, some of the issues and concerns HR 36 raises are not addressed in their entirety by any one survey, but are covered by all the surveys collectively. For

example, the MSU survey was designed to test and measure the ability of shoppers to retain price information. The New York Legislature survey attempted to quantify the relationship between, and necessity of, item price information and shopping for groceries at Wegman's Country Club Plaza. Gylling's survey and the Field poll were designed to measure acceptance of the UPC and reaction to item price removal among shoppers in the GEMCO store in San Leandro.

Following is a summary of each of the surveys mentioned and their major findings.

Michigan State University Survey

The consumer reaction to UPC implementation without item prices prompted the grocery industry to contract with Michigan State University to conduct a survey on actual shopper behavior. "The purpose of this study was to assess the effect of the discontinuance of item price marking on shoppers' ability to make food purchases effectively. The central focus was on the actual behavior of shoppers, rather than their attitudes."[1]

Some of the major issues identified for research were: 1) ability to determine prices of products on shelves, 2) price awareness in stores, 3) ability to make price comparisons between items, 4) shopping time, 5) price awareness in the home, 6) ability to follow prices and price changes over time, 7) ability to determine prices in the home, 8) criteria for store choice, and 9) satisfaction or dissatisfaction with the store.

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1. John W. Allen, Gilbert D. Harrell and Michael D. Hutt, Summary Results of Consumer Shopping Behavior Pricing Study, Research Report Conducted for the Ad Hoc Committee of the Grocery Industry for the Development of the Universal Product Code (Washington, D.C.: 23 March 1976), p. 1.

The survey was conducted in three phases over a period of six weeks. Three geographic metropolitan areas were selected as survey samples. In each area a UPC store was matched with a similar conventional store in the same supermarket chain for purposes of comparing shopping behavior in stores employing UPC systems without prices on products with stores using item pricing.

Following are major survey findings during each phase:

Phase I

During Phase I, a sample of 720 shoppers (120 from each of the six stores) were interviewed at the point of product selection. Respondents at UPC stores were allowed to look at shelf prices and respondents at conventional stores at package prices. During this phase the following was determined:

1. On the subject of price determination, conventional store shoppers reported the correct price more frequently than UPC store shoppers. Of the UPC store shoppers, 88% as compared with 96% of the conventional store shoppers gave the correct price.

2. On the reported difficulty in seeing prices, approximately 15% of the UPC store shoppers reported difficulty in seeing shelf prices, compared with 9% of the conventional store shoppers.

3. On price comparison, 21% of the UPC and 32% of conventional store shoppers said they had made price comparisons between two products.

Phase II

During Phase II, a sample of 1,500 shoppers (750 UPC and 750 conventional shoppers) were selected and interviewed at the point of checkout. Respondents were asked to identify prices of items they

had in their shopping carts and prices from a display of 40 commonly purchased items. Following are the findings:

1. On the subject of price awareness, it was determined that "there were significant differences between the percentage of correct responses of UPC store shoppers and of conventional store shoppers for items that shoppers selected from their carts and for items selected by the interviewer."[2] Shoppers in UPC stores correctly identified the price of 56% of the items, while conventional shoppers did the same thing for 71% of the items.

2. On price comparisons while shopping, 28% of persons in both stores indicated they made such a comparison. Of these, 80% in each store said they used prices in making comparisons. Shoppers were also asked to state whether they compared the price of canned food items with the same items in fresh or frozen condition. Eight percent of shoppers in both stores made this comparison.

3. On the subject of shopping time, it was found that there were no differences between UPC and conventional stores in shopping time.

4. On the difficulty in seeing prices, 40% of UPC store shoppers and 15% of conventional store shoppers reported difficulty in seeing prices during shopping trips.

Phase III

During Phase III, approximately 700 shoppers were interviewed during the six-week test period. "This approach provided the opportunity to examine price awareness at three different times and to

2. Allen, Harrell and Hutt, p. 11.

monitor the consumer's price knowledge of specific items over the test period. Respondents were asked to give the price of a product identified during Phase II, and several brands selected by the shopper from a list of nine commonly purchased products."[3]

The following was determined:

1. On the issue of price awareness in home, 20% of UPC shoppers as compared with 31% of conventional store shoppers gave correct prices. "It, therefore, is concluded that store type is related to in-home price awareness."[4]

2. On the subject of price awareness over time, 39% of UPC shoppers as compared with 57% of conventional store shoppers provided correct prices.

3. On price determination in the home, 20% of UPC shoppers and 44% of conventional shoppers gave correct prices. "It is concluded that UPC shoppers exhibit less correct price determination ability in the home than conventional store shoppers."[5] On the issue of price information used by shoppers in the home, 5.4% of UPC shoppers used UPC receipt tapes and 41% of conventional store shoppers used item prices of products stored in the home in order to determine prices.

4. On store satisfaction, 67% of UPC and 44% of conventional store shoppers were satisfied with the checkout speed. On the ease of reading prices, 41% of UPC and 65% of conventional store shoppers were satisfied with the ease of reading prices.

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3. Allen, Harrell and Hutt, pp. 14-15.
4. Ibid., p. 15.
5. Ibid., p. 17.

5. On the subject of store loyalty, 47% of UPC shoppers switched stores as compared with 31% of conventional store shoppers.

New York Legislature Survey

At the request of the New York State Legislature, the staff of the Senate Committee on Consumer Protection conducted a survey "to measure customer reaction to the Universal Product Code and to the removal of prices from individual store items."[6]

The survey was held on 9-10 October 1975, in Wegman's Country Club Plaza Supermarket, Fairport, New York. A total of 250 persons who were regular store shoppers were interviewed. The majority of the interviewees (62.4%) were between 30 and 59, and 11.2% were between 60 and 69.

Listed below are seven of the questions asked and the responses received.

1. Do you comparison shop?

   Yes - 80%[7]
   No - 20%

2. What do you find most helpful for your comparison shopping?

   Newspaper ads - 58.5%
   Item pricing - 22.6%
   Unit pricing - 18.9%

3. Would you mind if the item prices were removed from the packages?

   Yes - 88.8%
   No - 11.2%

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6. New York, State Senate Standing Committee on Consumer Protection, Universal Product Code, Final Staff Report, p. 36.
7. Of the 80%, or 200, who comparison shop, 179, or 89.5% stated they would mind if prices were removed.

4. If the item prices were removed from packages, would you actively object?

   Yes - 67.6%
   No - 32.4%

5. Is checking out here a lot faster and easier than at other supermarkets?

   Yes - 44%
   No - 56%

6. Do you use the computer receipt tape from this store to compare prices with other supermarkets?

   Yes - 8.4%
   No - 91.6%

7. Have you been doing more of your shopping here since the installation of UPC?

   Yes - 11.2%
   No - 84.8%

Graduate Student Survey[8]

Mary Hurff Gylling, of San Jose State University, conducted a survey of consumer attitudes toward UPC. The survey was conducted at Lucky's GEMCO Store, San Leandro, California between 6 June and 19 June 1975. A sample of 150 GEMCO store members were selected for the survey.

Following are major findings of this survey.

1. Of those interviewed, 87% expressed a degree of enthusiasm

8. Mary Hurff Gylling, "A Study of Consumer Attitudes Toward the Universal Product Code and Computerized Checkout Among A Selected Group of Shoppers at Lucky's GEMCO in San Leandro, California," a thesis presented to the Office of Graduate Studies and Research, San Jose State University, January 1976.

toward UPC ranging from "extreme like" to "very much." 11.3% indicated a degree of dislike and the rest were neutral.

2. Of all the respondents, 76% felt that the UPC system had advantages while 22% felt it did not. The rest did not know.

3. "The advantage mentioned most often by all respondents was that the UPC system provides for a faster checkout time. Forty-two percent of those interviewed mentioned the fast checkout aspect. Thirty-two percent said the descriptive sales receipt was an asset provided by the system, and 12% mentioned the accuracy of the computer system as being appealing...Of those persons who felt the system did not have advantages, several said the only benefits were those for the store, with none for the consumer."[9]

4. Of all respondents, 38% did not approve of item price elimination. Most of these respondents stated that item price elimination made comparative shopping difficult. Other reasons mentioned were:

"a. Can't compare the prices of items on the kitchen shelves at home.

b. Can't tell if the correct price is being rung up at the register.

c. Can't tell the price of an item once it is on the shelf at home.

d. Shelf price tags in the store get mixed up, thus it is difficult to determine the correct price of an item."[10]

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9. Gylling, p. 39.
10. Ibid., p. 40.

Field Survey

In January 1975, Lucky Stores, Inc. commissioned the Field Research Corporation to conduct a survey of Lucky's San Leandro GEMCO cardholders on their reaction to the store's conversion to UPC and the elimination of item pricing.

The survey was conducted by telephone and was based on responses obtained from 404 households.

Following is a summary of the highlights of the Field survey:

1. "Almost one-third of all respondents voluntarily mention they dislike the fact that prices are no longer marked on each item and when asked outright, 49% say they are bothered by this...92% of those respondents preferring the old system overall indicate they are bothered by this aspect. Among those who prefer the new system overall, over a third mention being bothered."[11]

2. "Respondents who said they are bothered by the removal of item pricing were asked whether they still thought items should be price marked if not doing so, it would cut down on the store's operating costs which over time would help to hold down prices. Even with this suggestion, about three out of ten shoppers say they still want the prices marked on each item."[12]

3. The majority of shoppers interviewed indicate preference for the new checkout system by a margin of 59% versus 21%. The remaining 19% feel the same about both systems, and 1% did not report

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11. Field Research Corporation, A Survey of Reaction to the New UPC Checkout System Among GEMCO Shoppers, conducted for Lucky Stores, Inc., April 1975, pp. 7 and 19.
12. Ibid., p. 21.

or did not know.

4. "31% of respondents said they had experienced problems in finding the appropriate price for an item on the shelf."[13]

13. Ibid., p. 8.

The Impact of UPC on Consumers

The supermarket computer checkout systems have become a national issue generating controversy among three groups: the supermarket industry, consumers and the retail clerks union.

This section outlines and analyzes issues on the controversy between consumers and the grocery industry over implementation of the computerized checkout system (UPC) without a price marked on each item. Consumer and industry positions and views identified in this report represent the concerns of these groups only.

The focal point of the consumer reaction against UPC has been the introduction of the system without item pricing. If the grocery industry had introduced UPC without removing item prices, consumers would have accepted UPC as a convenient innovation in supermarkets; however, because the industry chose to introduce UPC without item pricing, consumer acceptance of the electronic checkouts has hinged on this issue.

The grocery industry developed the UPC system to facilitate the wholesale and retail distribution of packaged food items, thereby reducing inventory and item pricing costs. The idea for the development of an automated checkstand counter was first conceived during the 1930's. The last 25 years have witnessed different stages of the grocery industry's experimentation with the system.

The grocery industry views this system as a solution to one of its major problems, lagging productivity. Gordon F. Bloom, former board chairman of the National Association of Food Chains, states

that "improvement in productivity in store level operations has been negligible over the years and may actually have diminished in the last two years."[13] Technological progress is an essential component of productivity and efficiency. Consequently, with the advent of technological development in the industry in the form of UPC, it is no surprise that retailers view item pricing as old-fashioned and a costly luxury.

Before the introduction of UPC, item pricing was considered a primary information component by both consumers and retailers. Consumers used item pricing as a basic tool to informed shopping and retailers as protection against the fallible memory of sales clerks.

The consumers' demand to keep item pricing has been portrayed by the industry as fear of innovation and technological progress. Consumers declare, however, that what is at stake is the right to basic information versus big business profits. The industry claims that consumers have become pawns to labor's vested interest in preserving retail clerk jobs at the cost of efficiency, increased productivity, and, thus, lower prices. The grocery industry, on the whole, has failed to recognize that consumer groups have raised some legitimate questions on the dangers of removing item prices. These concerns have not been addressed satisfactorily by the industry, nor have consumers' fears of manipulation been allayed.

Central to all of these issues is the fact that food is a

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13. Gordon F. Bloom and Ronald C. Curhan, "Technological Change in the Food Industry," Technological Review, December 1974, p. 22.

necessity; altering or tampering with the way food is marketed will result in consumer concerns and reactions.

Since the first installation of the UPC system at Kroger's supermarket in the United States in 1972, the grocery industry and consumer organizations have been in conflict over item pricing.

Consumers' Perspective

A review of consumer literature on UPC indicates that consumers do not oppose the introduction and implementation of the system; they contend that using the system without item pricing is an "unnecessary and unjustified sacrifice of their right to basic price information."[14]

Following is an identification and discussion of issues raised by consumer advocates on implementation of UPC and the elimination of item price marking. These issues have been stated repeatedly by consumers in order to stress the significance of item pricing for the average shopper.

1. Item prices are important at the point of purchase. Consumers say that forcing the shopper to rely on shelf prices limits his or her price information because shelf prices are inadequate and unreliable.

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14. Statement by Lee Jones before a hearing of the California Legislature, Assembly Committee on Finance, Insurance and Commerce, Sacramento, February 24, 1975 on behalf of the Northern California Public Interest Research Group, Inc.

Surveys conducted on shelf price information reliability and readability showed that many shelf labels were either unusable or only partially usable because of shelf overhang, label misplacement or distance between shelf information and package.[15]

Consumers also contend that shelf prices often do not reflect current prices. Gordon F. Bloom makes the following observation on this subject:

> Presently, when prices are changed at headquarters in a supermarket chain, new strips for shelf markers are printed and sent to the stores via intra-company mail and distributed via truck deliveries. Since many stores do not receive a daily truck delivery from the chain warehouse, the change may not be made in the shelf price marker until several days after the price has changed in the computer. This time lapse cannot be tolerated under the automatic checkout system; price changes at headquarters will immediately be recorded in the mini-computer at store level and the customer will be charged the new prices. Therefore, the shelf marker must be changed at the same time.[16]

To date, the food industry has not come up with a solution to the inadequacies of shelf price marking. It is the industry's position that using shelf price information and the UPC receipt tape is an adequate source of price information.

2. Item pricing provides the opportunity to compare prices between stores, between shopping trips and between products.

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15. U.S., Federal Trade Commission, Economic Report on Food Chain Selling Practices in the District of Columbia and San Francisco, Staff Report (Washington, D.C.: Government Printing Office, 1969) and U.S., Comptroller General, Report to the Congress on Food Labeling: Goals, Shortcomings and Proposed Changes, (Washington, D.C.: Government Printing Office, 1975).

16. Bloom, p. 28.

Getting the best value for one's money is important to consumers and is reinforced by retailers through sales and advertising. Based on this principle alone, item pricing becomes significant for comparing the price on a product just purchased to the price of the same product bought at an earlier date. A price differential between identical products might cause a change in the consumer's buying patterns, especially if the products were purchased at different stores.

In addition, prices marked on each item allow consumers to compare prices of different products in the store before they decide to buy. They can decide whether to buy frozen beans or canned beans and decide between different brands.

Consumer advocates fear elimination of item pricing will result in a diminished price consciousness which may lead to a rise in food prices that will be difficult for the consumer to detect. In fact, consumers claim that substitution of the UPC for a readable price will "institutionalize inflation." Fight Inflation Together, a California consumer organization, states, "It is ironic that the food industry will not agree on any uniform dating codes, or uniform grade standards, or uniform packaging, any one of which would help the consumer decide on the best quality for her money, but they can agree on a uniform labelling system, a Universal Product Code, that takes information away from the consumer.[17]

17. Statement on behalf of Fight Inflation Together by Ruth Yannatta before a hearing of the California Assembly Committee on Finance, Insurance and Commerce, Sacramento, February 24, 1975.

3. Elimination of item prices will result in a memory test at the checkout counter.

An average shopping trip involves buying approximately 30 grocery items. Memorizing the price of each item in order to check it against the UPC readout requires extraordinary recall ability. Given the speed of the new system, it will be impossible for the shopper to make an intelligent comparison between product price and price recorded on the checkout screen or even to catch any errors.

In an attempt to meet consumers' demands for an additional source of price information other than shelf pricing, retailers offered to supply shoppers with grease pencils for marking the price on the product. Consumers view this offer as a casual response to a serious concern. Consumer advocates call it a public-be-damned attitude and rank it along with Marie Antoinette's famous pronouncement, "Let them eat cake."

4. The detailed computer receipt is of limited use to the shopper because (a) it is available only after the transaction has been completed, (b) it has no brand or size identification, and (c) it lacks standardization.

The receipt is of no use to the shopper either at the time of purchase or if the shopper keeps the receipt, at the time of his or her next shopping trip at the same supermarket. Prices on some items will have changed due to inflationary trends and the shopper may not buy the same products.

The industry prides itself on the UPC sales receipt's detail in describing the product, yet the receipt does not contain size and often does not include brand identification. Shoppers, while encouraged by the industry to use the receipt for price comparison between one shopping trip and the next, may not be able to remember what size or brand is referred to by the notation "margarine 39¢" in last week's receipt.

Finally, because of the number of manufacturers of automated checkout systems, receipt tapes lack standardization. Different systems use varying forms of product description and abbreviation. One of the factors which increase productivity is the degree of standardization employed by an industry as a unit or by an individual store. Consumer organizations, although supportive of industry efforts for detailed receipt tapes, point to the existing limitations on the use of such tapes.

5. Shelf pricing does not meet the needs of the elderly. For many elderly persons, shopping in a supermarket is a difficult chore. Subjecting them to the rigors of memorizing prices or bending down to check prices is an unnecessary trial.

6. Shelf pricing is not an adequate source of information for the foreign-speaking population. A UPC receipt tape, which under the UPC system will be the main source of price comparison and information, no matter how detailed, is of limited use to the sizable foreign-speaking population in California who depend on seeing the price on the item.

Industry's Perspective

The supermarket industry rebuts these arguments by enumerating the system's benefits to the consumer: faster checkout time, shelf and inventory control, and possible price reductions resulting from increased industry profits.

1. To the retailer, the checkout process is costly and labor intensive; to the shopper, it is time consuming.

Any time saved at the checkout stand primarily benefits the industry because it translates into more efficient store operation at lower cost. The lower cost is realized by reduced labor requirements, such as the need for baggers. The overall shopping time will remain approximately the same for consumers because the system has no effect on the time spent by the shopper selecting items from the shelf.

2. The UPC system will help keep track of products that require frequent restocking. Consequently, the system will reduce the times a retailer runs out of stock, an occurrence that frustrates both the shopper and the retailer.

3. In stores where UPC is installed, the industry anticipates a net savings before taxes for retailers equal to 1.0% to 1.5% of sales. This figure assumes there will be no item pricing.

Based on this estimate of savings, the industry forecasts the probability of price reductions. To date, no range of price reductions has been calculated by the industry; only the likelihood of such occurrence has been recognized. The industry's reason for not

estimating possible price reductions is that prices are sensitive to many factors, such as labor and production costs, that are independent of profit percentages.

Consumer advocates are skeptical of industry statements that mandatory item pricing will create financial hardships for stores which use UPC. They believe that a store can install UPC with item pricing and still realize savings. Industry literature affirms this belief through theories and conjectures which speculate that soft savings will eventually surpass hard savings. The industry in its effort to eliminate item pricing, predicts financial hardship if the savings from eliminating item prices are forfeited. "Without those savings, many stores will undoubtedly delay implementation, and some will not implement at all. Thus, the 25% should not be given up automatically."[18] In other words, if the UPC is implemented with item pricing, then the industry will lose 25% of the savings predicted if the system were implemented without item pricing. The remaining 75% of savings will be realized regardless of item pricing. Bloom notes that "initial adoptions of automated checkout systems will be based on 'hard' savings, much in the fashion that early computer installations were justified on their bookkeeping value; but that their contribution in the area of 'soft' benefits will, in the long run, have a more radical impact on the industry."[19]

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18. UPC Public Policy Issues: Background Information for Assistance in Responding to Consumer Groups, Legislators and Media, prepared for the Public Policy Subcommittee of the Grocery Industry's Ad Hoc Committee on UPC, March 19, 1975, p. 10.
19. Bloom, p. 26.

Related Issues

The grocery industry and consumer advocates differ over the issue of consumer participation in the implementation of the UPC system. The industry contends that once the UPC concept was developed, consumer participation in the system's implementation was solicited and obtained; however, consumer representatives say that their interests and suggestions were not adequately considered. The grocery industry's Ad Hoc Committee on the UPC reinforces the consumer's position by a statement in its report on the UPC which states "when there were potential consumer trade-offs, the choices were really predetermined by economics."[20]

The industry asserts that UPC is still in its experimental state and "any legislation which aborts experimentation with innovation inhibits full development of a concept."[21] This statement, however, must be considered in light of the industry's financial commitment. To date, the industry has committed $50 million to develop the UPC concept. One hundred three stores nationwide -- fifteen in California -- have purchased UPC equipment and converted to the system's requirements. Promotional, advertising and public relations costs, although not reported, may be considerable. In addition, a major survey was financed by the industry to test consumer behavior and attitudes vis-a-vis the UPC system. These facts indicate that the grocery industry has made a substantial commitment for implementation of the UPC system.

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20. UPC Public Policy Issues, p. 28.
21. Untitled pamphlet published by the California Retailers Association and the California Grocers Association, (undated), p. 4.

Legislation on Item Pricing

The U. S. Congress and state and local governments are considering legislation to require mandatory item pricing of food products in supermarkets.

Legislation was introduced in the U. S. Senate and the U. S. House of Representatives (S 997 and HR 4149) in 1975 to require item pricing on food products sold in supermarkets. Neither bill passed.

Mandatory item pricing is law in four states: Connecticut, Massachusetts, New York and Rhode Island.

The following cities and counties have also passed mandatory item pricing legislation:

Cities	Counties
Benton, Illinois	Dutchess County, New York
Des Plaines, Illinois	Nassau County, New York
Chicago, Illinois	Rockland County, New York
Elk Grove, Illinois	Suffolk County, New York
Franklin Park, Illinois	Westchester County, New York
Highland Park, Illinois	
Lincolnwood, Illinois	
North Chicago, Illinois	
Skokie, Illinois	
Waukegan, Illinois	
Cuyahoga Falls, Ohio	
Mansfield, Ohio	
Toledo, Ohio	
Kenosha, Wisconsin	

The Michigan and Ohio legislatures passed item pricing bills which were vetoed by their governors. In addition, in Colorado, Minnesota and Wisconsin similar legislation was introduced that cleared only one house of the legislature.

During the 1975-76 Session, the California Legislature introduced several measures dealing with mandatory item pricing. The only measure

by Senator David Roberti. This law will remain in effect for only one year from 1 April 1976 to 1 April 1977.

The 1975 statute requires that from 1 April 1976 to 1 April 1977 any grocery store which uses an automatic checkout system have a readable price on specified consumer commodities offered for sale. This requirement is not applicable to any consumer commodity which was not item priced on 30 June 1975 or to any sale items or weekend specials offered for sale in a grocery store using an automatic checkout system. Any violation is punishable by a civil fine of not less than $25 nor more than $500. Each 12 items not priced in compliance constitutes a separate violation and each day that a violation continues also constitutes a separate violation. The California Department of Food and Agriculture, through its Division of Measurement Standards, is authorized to enforce the provisions of this law.

On 8 December 1976, SB 32 (Roberti) and AB 18 (Rosenthal) were introduced to continue the provisions of SB 261. These bills would also permit any person to bring an action to enjoin a violation or to recover treble damages.

My name is Pete Kelley. I represent the Nevada Retail Association which opposes Senate Bill 371.

SB 371 HAS TO BE ONE OF THE MOST UNIQUE BILLS EVER TO COME BEFORE A COMMITTEE OF THIS LEGISLATURE. TO THE BEST OF MY KNOWLEDGE, IT SEEKS TO LEGISLATE AGAINST ONLY out of approximately 14,000 ONE BUSINESS FIRM IN THE ENTIRE STATE OF NEVADA WHICH NOW IS TESTING CHECKOUT SCANNER EQUIPMENT CAPABLE OF READING THE UNIVERSAL PRODUCT CODE. THIS TEST IS BEING DONE IN AN EFFORT TO SEE IF THE COMPUTER AGE CAN BRING ABOUT MORE EFFICIENCY IN THE FOOD MARKETING BUSINESS, AND Resultant Benefits To Consumers.

THIS BILL WOULD BE COMPARABLE TO A BILL INTRODUCED IN 1903 BY THE NORTH CAROLINA LEGISLATURE PROHIBITING THE WRIGHT BROTHERS FROM TESTING A NEW FANGLED CONTRAPTION WHICH SUPPOSEDLY WOULD FLY, BECAUSE MODE OF TRANSPORTATION AT THAT TIME APPEARED ADEQUATE.

I BELIEVE THE ONLY STORE TESTING SUCH EQUIPMENT IN NEVADA IS THE SAFEWAY STORE ON NORTH CARSON STREET, CARSON CITY. THEIR TEST OF UPC EQUIPMENT HAS BEEN GOING ON SINCE ABOUT MID-1976. SAFEWAY, WHOSE HEADQUARTERS ARE IN OAKLAND, PIKCED THE CARSON SITE AS A TEST SITE AFTER IT WAS UNABLE TO DO SO IN CALIFORNIA BECAUSE OF PREMATURE AND RESTRICTIVE LEGISLATION BASSED IN THAT STATE.

THE UNIVERSAL PRODUCT CODE, OR UPC, IS A REVOLUTIONARY NEW SYSTEM FOR IDENTIFYING GROCERY PRODUCTS THAT WILL HELP CONSUMERS BY AUTOMATING THE CHECKOUT COUNTER AT THE GROCERY STORE AND INCREASING INDUSTRY PRODUCTIVITY. THE UPC IS 10 BILLION COMBINATIONS OF VERTICAL BAR LINES OF VARYING THICKNESSES. THE THICKNESS OF THE BARS IS READ AS THE

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PACKAGE IS PASSED OVER THE ELECTRONIC SCANNER BUILT INTO THE CHECKOUT STAND. IN LESS THAN A SECOND THE SCANNER WILL TRANSLATE, THROUGH USE OF A PRE-PROGRAMMED COMPUTER, THE UPC SYMBOL INTO AN ITEM DESCRIPTION AND PRICE WHICH WILL APPEAR ON A VIEW SCREEN FOR THE CONSUMER.

THE CARSON CITY TEST, WHICH STILL IS IN PROGRESS, WAS THE FIRST FOR SAFEWAY. SINCE INAUGURATION OF THE CARSON CITY SCANNER, TESTS HAVE BEEN COMMENCED IN KANSAS CITY AND SEATTLE.

WHEN IT WAS ANNOUNCED THAT THE CARSON STORE HAD BEEN CHOSEN FOR TESTING OF THIS NEW EQUIPMENT, SAFEWAY SHORTLY THEREAFTER, WITH MY HELP, ESTABLISHED A CONSUMER PANEL OF CARSON CITY TO EVALUATE THE PROCESS AS IT DEVELOPED. ON THIS PANEL WERE PEOPLE REPRESENTING A CROSS SECTION OF NEVADA'S ECONOMY--LOCAL AND STATE REPRESENTATIVES; A REPRESENTATIVE OF THE RETIRED COMMUNITY; HOUSEWIVES AND PTA REPRESENTATIVES.

IT WAS ANNOUNCED THAT ONCE EQUIPMENT WAS INSTALLED AND IN PROPER WORKING ORDER THAT THE SCANNER WOULD BE TESTED--A HALF YEAR WITH PRICES ON, AND THE REMAINING HALF YEAR WITH PRICES OFF.

THE CONSUMER PANEL MET FREQUENTLY WITH SAFEWAY OFFICIALS AND EVERY POSSIBLE STEP OF THE OPERATION WAS DETAILED AND EXPLAINED TO THEM. A REPRESENTATIVE OF THE CARSON PRESS WAS IN ATTENDANCE AT ALL MEETINGS, SO THAT NO INFORMATION WHATSOEVER WAS WITHHELD. THE MEETINGS HELD HAD LIVELY QUESTION AND ANSWER PROGRAMS IN AN EFFORT BY SAFEWAY TO ANSWER ALL POSSIBLE QUESTIONS CONCERNING THE NEW EQUIPMENT.

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IN SHORT, SAFEWAY STILL IS IN THE TESTING PROCESS IN THE CARSON CITY STORE AND WOULD LIKE TO MAINTAIN ITS FLEXIBILITY IN [redacted] BEING ABLE TO CONTINUE SUCH TESTING. WHETHER OR NOT UPC EQUIPMENT WILL BECOME COMMONPLACE IN ALL SAFEWAY STORES CANNOT BE DETERMINED. OFFICIALS SAY THAT THE NEW SYSTEM DEFINITELY IS WORKABLE BUT THEY DO NOT ANTICIPATE ANY QUICK OR WIDESPREAD CHANGEOVER. INSTALLATIONS ARE EXPENSIVE AND COMPLEX AND RETAILERS WILL MOVE CAUTIOUSLY IN EVALUATING THE PERFORMANCE.

HOW SOON, AND EVEN WHETHER ELECTRONIC CHECKOUT BECOMES COMMONPLACE WILL DEPEND ON HOW TESTS SUCH AS THAT BEING CONDUCTED IN CARSON CITY WORK OUT....AND ON FUTURE IMPROVEMENTS IN EQUIPMENT.

THE FOOD INDUSTRY, IN ITS EFFORTS TO GIVE BETTER SERVICE TO CONSUMERS AND TO IMPROVE EFFICIENCY, SHOULD NOT BE HAMSTRUNG WITH LEGISLATION WHICH COULD RESTRICT THESE BENEFITS.

EACH WEEK, SAFEWAY EMPLOYEES PRICE MARK ABOUT 215,000,000 PACKAGES. UNDER THE NEW ELECTRONIC SYSTEM, THE COMPUTER CAN READ THE UPC SYMBOL AND KNOW THE PRICE WITHOUT HESITATION OR BE ERROR. LARGE SHELF PRICE TAGS CAN STILL INFORM THE CUSTOMER AT THE SHELF DISPLAYS. THE ELECTRONIC SCREEN SHOWS THE PRICES AT THE CHECK STAND AND THE ITEMIZED RECEIPT GIVES A TAKE HOME RECORD OF THE PRICE OF EACH MAIN ITEM.

ONE OF THE GREAT PLUSSES SO FAR FOR THIS SYSTEM IS THE ITEMIZED RECEIPT WHICH CONTAINS A DESCRIPTION OF EVERY ITEM AND ITS PRICE...IT ALSO SHOWS ANY DISCOUNT COUPONS

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TURNED IN BY THE CUSTOMER...ITEMS ELIGIBLE FOR FOOD STAMP PURCHASE, DEPOSITS OR REFUNDS FOR BEVERAGE BOTTLES, AND EVEN SPECIAL SALE PRICES ARE ALSO RECORDED ON THE RECEIPT. ALL OF THESE ITEMS ARE TOTALED AND THE CHANGE DUE THE CUSTOMER IS SHOWN.

THE ITEMIZED RECEIPT IS OBVIOUSLY A REAL HELP TO THE CUSOMTER. THEY HAVE AN ITEMIZED RECORD, CLEAR AND ACCURATE, OF EVERYTHING PURCHASED. THEY EVEN CAN USE IT TO COMPARE PRICES PAID FOR AN ITEM AT DIFFERENT TIMES OR TO GET THE BEST SHOPPING VALUE BY COMPARING THE PRICES BETWEEN DIFFERENT MARKETS.

THERE ARE MANY BENEFITS TO BE GAINED FROM AN ELECTRONIC CHECKOUT SYSTEM. SOME WILL BE IMMEDIATELY OBVIOUS TO THE CONSUMER AND SOME WILL EMERGE ONLY AFTER A PERIOD OF ADJUSTMENT TO THE SYSTEM. MOST OF THESE BENEFITS WILL BE A RESULT OF THE WEALTH OF INFORMATION SUCH ADVANCED TECHNOLOGY PROVIDES. THERE SHOULD BE NO RESTRICTION ON PRIVATE INDUSTRY TO IMPROVE ITSELF.

THE SO-CALLED SCANNER PROGRAM STILL IS IN ITS TESTING PHASE. THERE ARE ONLY ABOUT 100 ~~TWO DOZEN~~ SUPERMARKETS THROUGHOUT THE COUNTRY THAT HAVE UPC AUTOMATED CHECKOUT SYSTEMS IN OPERATION.

THE ISSUE OF restrictive UPC LEGISLATION IS PREMATURE ACCORDING TO ALBERT REES, FORMER DIRECTOR OF THE COUNCIL ON WAGE AND PRICE STABILITY. IN COMMENTING ON UPC LEGISLATION IN THE VARIOUS STATES, HE SAID: "SUCH BILLS WOULD DEPRIVE CONSUMERS OF MUCH OF THE CONSIDERABLE SAVINGS TO BE ACHIEVED THROUGH AUTOMATED CHECKSTANDS. SUCH SYSTEMS SHOULD BE GIVEN A FAIR TEST TO ASCERTAIN WHETHER OR NOT ADEQUATE PRICE INFORMATION CAN BE GIVEN CONSUMERS THROUGH SHELF

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LABELS AND ITEMIZED RECEIPTS."

POINTING OUT THAT CONSUMERS, NOT THE LEGISLATURE, SHOULD DECIDE THE ISSUE OF INDIVIDUALLY PRICED ITEMS, THE CHICAGO DAILY NEWS (3/18/75) DECLARED: "FOOD STORES WOULD LIKE TO GET RID OF PRICE STAMPING, BUT THEY ARE NOT COMMITTTED TO THAT COURSE. THE RETAIL INDUSTRY IS HIGHLY COMPETITIVE AND A STORE THAT ADOPTS THE NEW CHECK-OUT SYSTEM COULD NOT AFFORD TO LOSE CUSTOMERS OVER THE ISSUE."

DIRECTLY OR NOT, COMPUTER TECHNOLOGY NOW TOUCHES UPON NEARLY EVERY ASPECT OF OUR DAILY LIVES. AS STORES HAVE INCREASED IN SIZE AND IN THE VARIETY AND NUMBER OF ITEMS SOLD, THE NEED TO APPLY MODERN TECHNOLOGY TO CONTROL COSTS AND PROVIDE GOOD CUSTOMER SERVICE HAS BECOME INCREASINGLY URGENT.

[illegible]

THROUGH THE SCANNER SYSTEM, THE GROCERY INDUSTRY IS ATTEMPTING TO UPGRADE ALL FACETS OF ITS OPERATION, BY BRINING BENEFITS TO THE CONSUMER AND MORE EFFICIENCY TO ITS OWN OPERATION. MANDATORY LEGISLATION RESTRICTING SUCH EXPERIMENTATION, SUCH AS SB 371 WOULD PROVIDE, IS NOT THE ANSWER AND WE ARE HOPEFUL THE BILL WILL BE DEFEATED.

FOR THOSE OF YOU ON THIS COMMITTEE WHO ARE NOT FAMILIAR WITH THE OPERATION OF A SCANNER, I URGE YOU TO VISIT SAFEWAY'S NORTH CARSON STREET STORE AND OBSERVE THE EQUIPMENT FOR YOURSELF. OR IF YOU DESIRE, I WOULD BE HAPPY TO ARRANGE WITH SAFEWAY A DEMONSTRATION OF THE EQUIPMENT FOR ALL MEMBERS OF THIS COMMITTEE.

THANK YOU FOR YOUR ATTENTION.

N

SAFEWAY STORE 747
CARSON CITY, NEVADA
10/25 9:15 6 990 5

WHEAT THINS	.71	TX
FOAM CUPS	.65	TX
CRANBERRY SC	.45	TX
CRANBERRY SC	.45	TX
STEWD TOMATO	.37	TX
STEWD TOMATO	.37	TX
1 @ 6/1.00		
TH CHKN NOOD	.17	TX
1 @ 6/1.00		
TH CHKN NOOD	.17	TX
1 @ 6/1.00		
TH CHKN NOOD	.16	TX
TH TOMATO SC	.29	TX
TH TOMATO SC	.29	TX
1 @ 4/1.00		
HNY APLSAUCE	.25	TX
1 @ 4/1.00		
HNY APLSAUCE	.25	TX
1 @ 4/1.00		
HNY APLSAUCE	.25	TX
1 @ 4/1.00		
HNY APLSAUCE	.25	TX
SW KDNY BEAN	.27	TX
SW KDNY BEAN	.27	TX
COTTAGE CHSE	1.17	TX
GG LASAGNE	.45	TX
PRICE DISCOUNT NXT ITM		
RRE AND BEEF	.44	TX
PRICE DISCOUNT NXT ITM		
RRE AND BEEF	.59	TX
PRICE DISCOUNT NXT ITM		
RRE AND BEEF	.69	TX
PRICE DISCOUNT NXT ITM		
RRE AND BEEF	1.05	TX
PRICE DISCOUNT NXT ITM		
RRE AND BEEF	1.05	TX
DORITO CHIPS	.75	TX
SOUR DOUGH	.67	TX
MNTEREY JACK	.91	TX
MNTEREY JACK	.96	TX
COLBY CHEESE	1.78	TX
1.06 LB @ 1.67		
YELLOW ONION	.33	TX
PAPER PLATES	.59	TX
PAPER PLATES	.59	TX
CHIFFON NPKN	.57	TX
FAMILY CIRCL	.79	TX
1 @ 2/.75		
HOMO MILK	.39	TX
.96 LB @ 7/1.00		
BANANAS	.14	TX

SUBTOTAL	18.97
TAX DUE	.62
TOTAL DUE	19.59

THANK YOU

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