Outlook for Livestock

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Price outlook has turned into a hazardous undertaking. In the red meat sector, we are apparently going through a period of transition on the demand side of the equation. Models that worked in the mid-1970's are not working in the mid 1980's. When the old reliable models quit working, this typically means the underlying structural parameters are changing. Since the supply-side numbers are relatively easy to uncover and supply can typically be projected with a reasonable degree of accuracy, at least in the short run, the finger of blame must be pointed at the demand side.

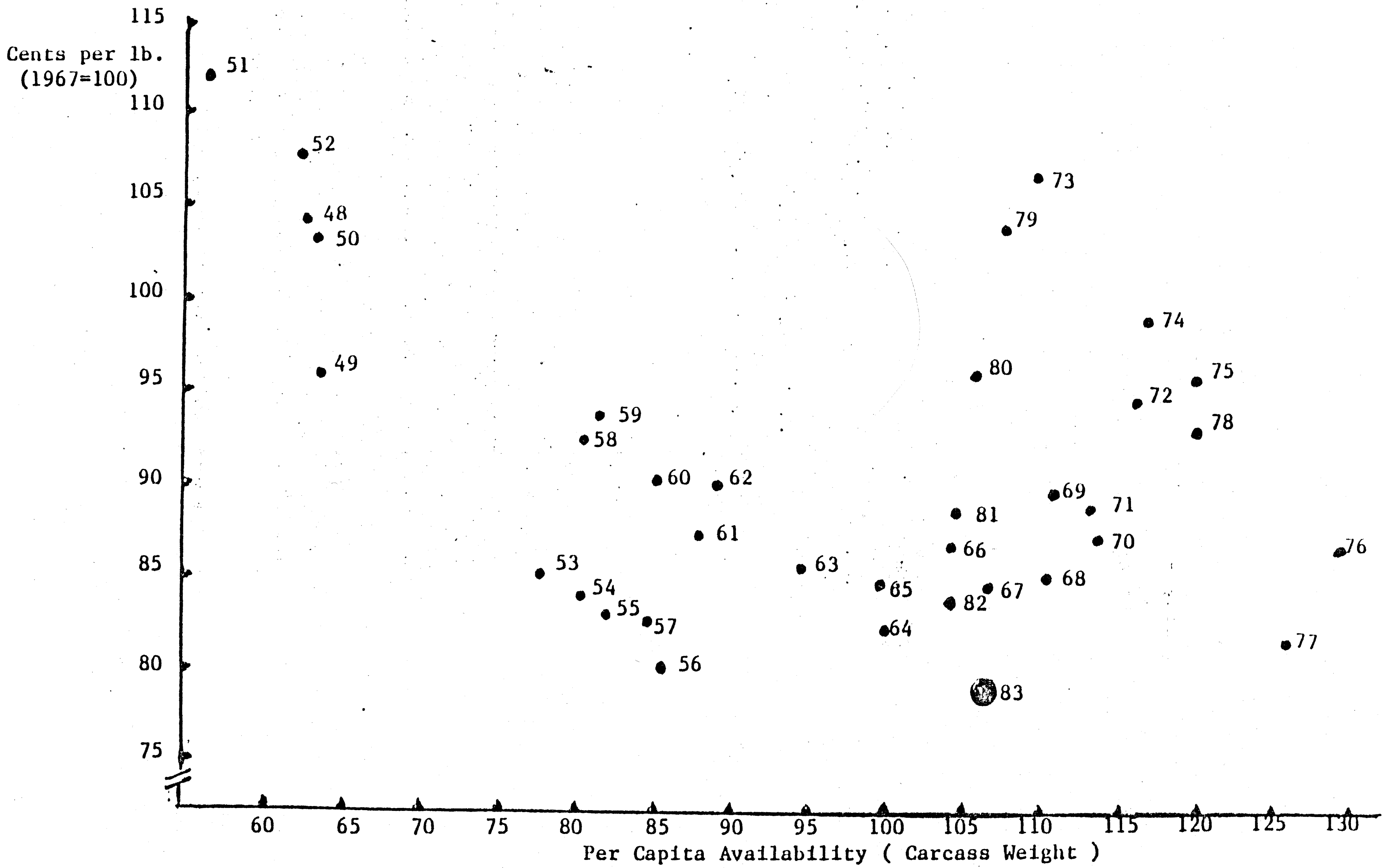
Basic economic logic supports the notion that the problems are largely on the demand side. If you look at estimates of the cost of producing a weaned calf, for example, you get some variation around the country, but the average total cost is in the neighborhood of $.90 per pound. The most casual observation suggests that steer calf prices have been well below that level in recent years. In theory, the market will react to such a disequilibrium position by forcing resources out of production and cutting the supply to drive price up toward the ATC of production. In 1976, during the last cyclical liquidation of the beef cow herd, per capita beef supplies approached 130 lbs. (carcass weight equivalent). The per capita supply for 1984 will be below 110 lbs.--but deflated retail beef prices will be significantly below 1976 levels. In hogs, producers have struggled through periodic losses in recent years despite per capita supplies at or below levels of the late 1970's. It is clear that we need to look to the demand side as the source of the problem in price projections and outlook.

Demand in Transition

Scatter plots of deflated retail beef prices against per capita availability starting with the post World War II period prove revealing (Figure 1). The period of growth in the 1960's and into the 1970's is apparent. During this period, the primary shifter was apparently income with solid rates of growth in real per capita disposable income and a favorable relationship between growth in income and expenditures on beef. Estimates of income elasticity during this period were in the .5 to 1.0 range. But whether due primarily to income or other demand shifters, the pattern was one of increasing per capita consumption at increasing real prices--explicit evidence of increases in per capita demand.

Starting in the second half of the 1970's, the positive relationships started to unravel. As per capita availability started its decline late in the decade, deflated price dropped too--and the yearly coordinates move down and to the left. Movement of this type is explicit evidence of decreases in per

Figure 1. Deflated Retail Prices (CPI) and Per Capita
Availability of Beef, 1948-83



capita demand. When examining price expectations in beef, it is clear the issue of dominant importance emerges from this apparent transition.

Though less dramatic, a similar pattern of retrenchment emerges on the scatter plot for pork (Figure 2). The coordinates for 1983 are not impressive.

Table 1 provides documentation of the continuing developments. Chavas' article concludes that structural changes in the demand for beef occurred in the 1975-79 period, but found no major changes for pork. Chavas' results essentially confirm the story told by the plots. The primary issues:

1. The income elasticity coefficient for beef decreased significantly during the second half of the 1970's;

2. Positive and relatively large cross elasticity coefficients for price changes in pork suggest pork has become a more acceptable substitute for beef;

3. Poultry has become a more acceptable substitute for beef and pork; and

4. Continued increases in the beef-to-pork and beef-to-poultry price ratios cause decreases in the demand for beef.

Behind these quantifiable dimensions of changes in the demand for red meats lurks the potential troublemaker--a slow but persistent change in the preference pattern for beef, for example. If consumers are indeed less willing to spend added income on beef, then there has to be a reason. Changing life styles, uncertainty and controversy over the cholesterol issue, and the lack of product development in response to possible changes in consumers' preferences are among possible reasons.

Figures 3 and 4 indicates per capita demand has not

Figure 2. Deflated Retail Prices (CPI) and Per Capita Availability of Pork, 1950-83

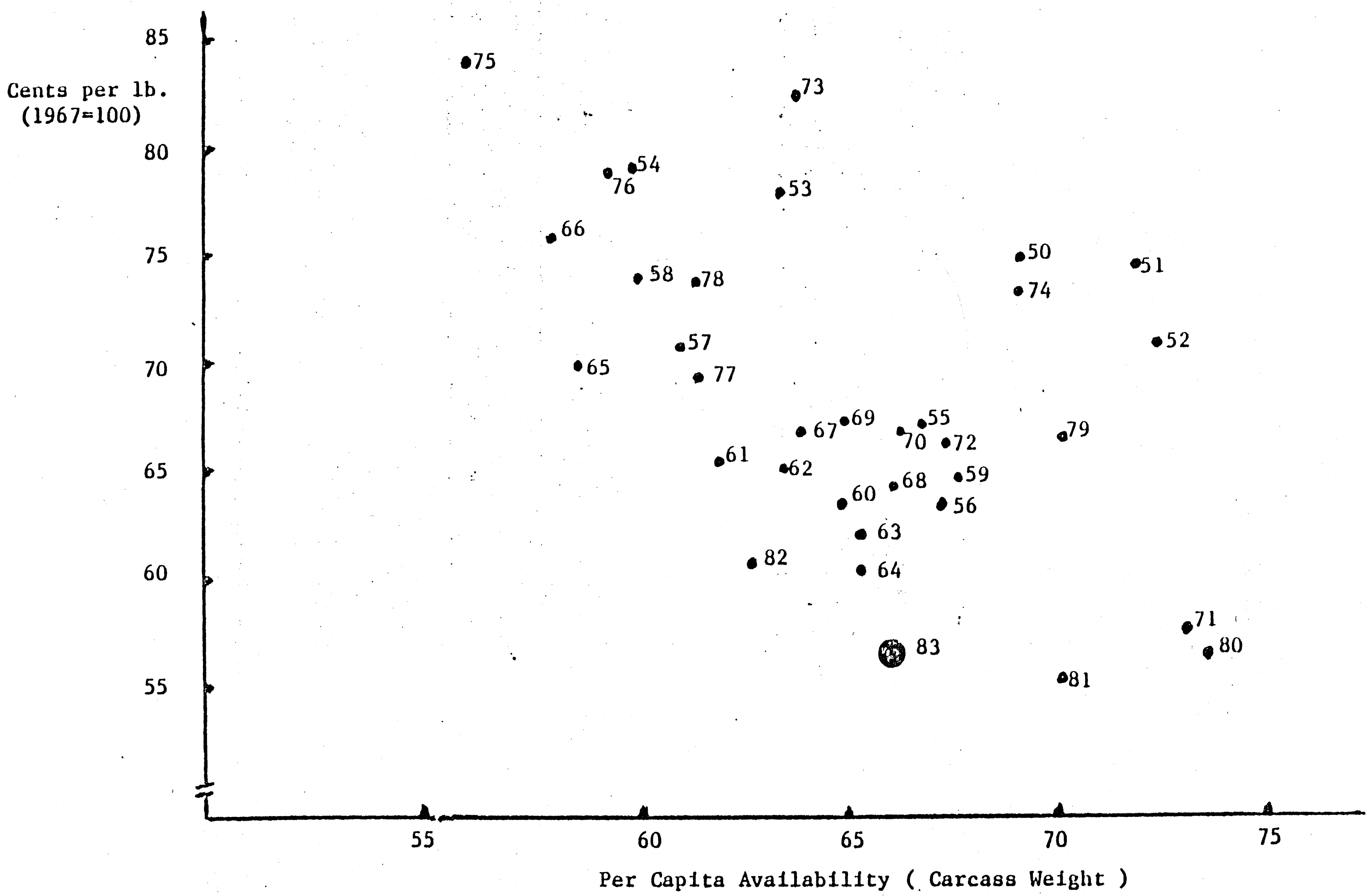


Table 1. Estimates of Elasticities for Meat

Elasticity of:	Beef			Pork			Poultry		
With Respect To	pork	income	poultry	beef	income	poultry	beef	income	pork
1975	.137	.655	.079	.186	.463	.075	.353	.012	.185
1976	.116	.696	.077	.180	.477	.074	.322	.258	.116
1977	.317	.288	.077	.194	.441	.074	.210	.201	.037
1978	.323	.189	.080	.199	.433	.075	.210	.213	.055
1979	.355	.183	.079	.217	.429	.076	.296	.275	.001

Source: Jean-Paul Chavas, "Structural Change in the Demand for Meat", Amer. J. of Ag. Econ., Vol. 65, No. 1, February 1983, p.152.

Figure 3 Deflated Retail Prices (CPI) and Per Capita Availability of Beef, Quarter II, 1950-84

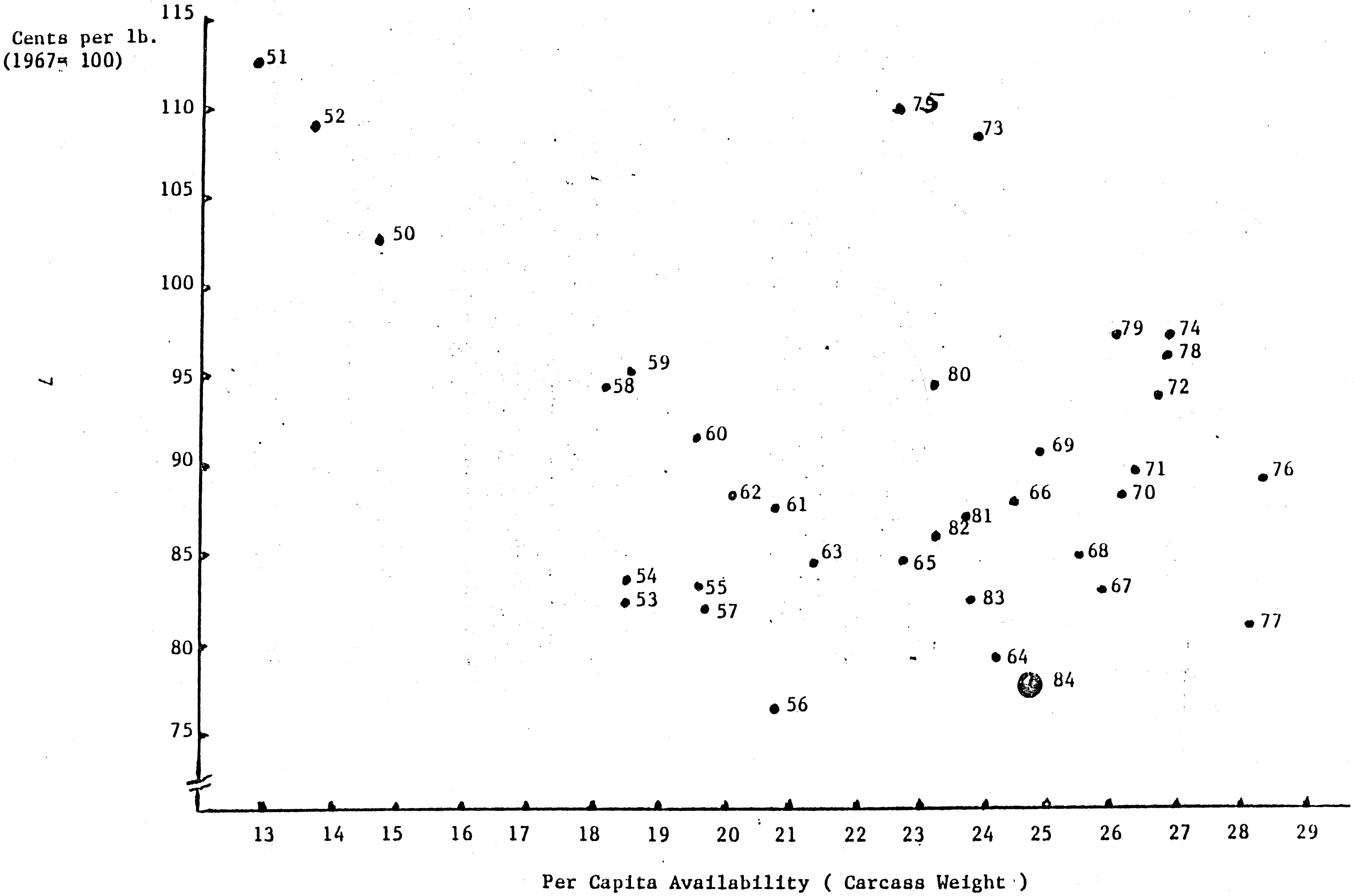


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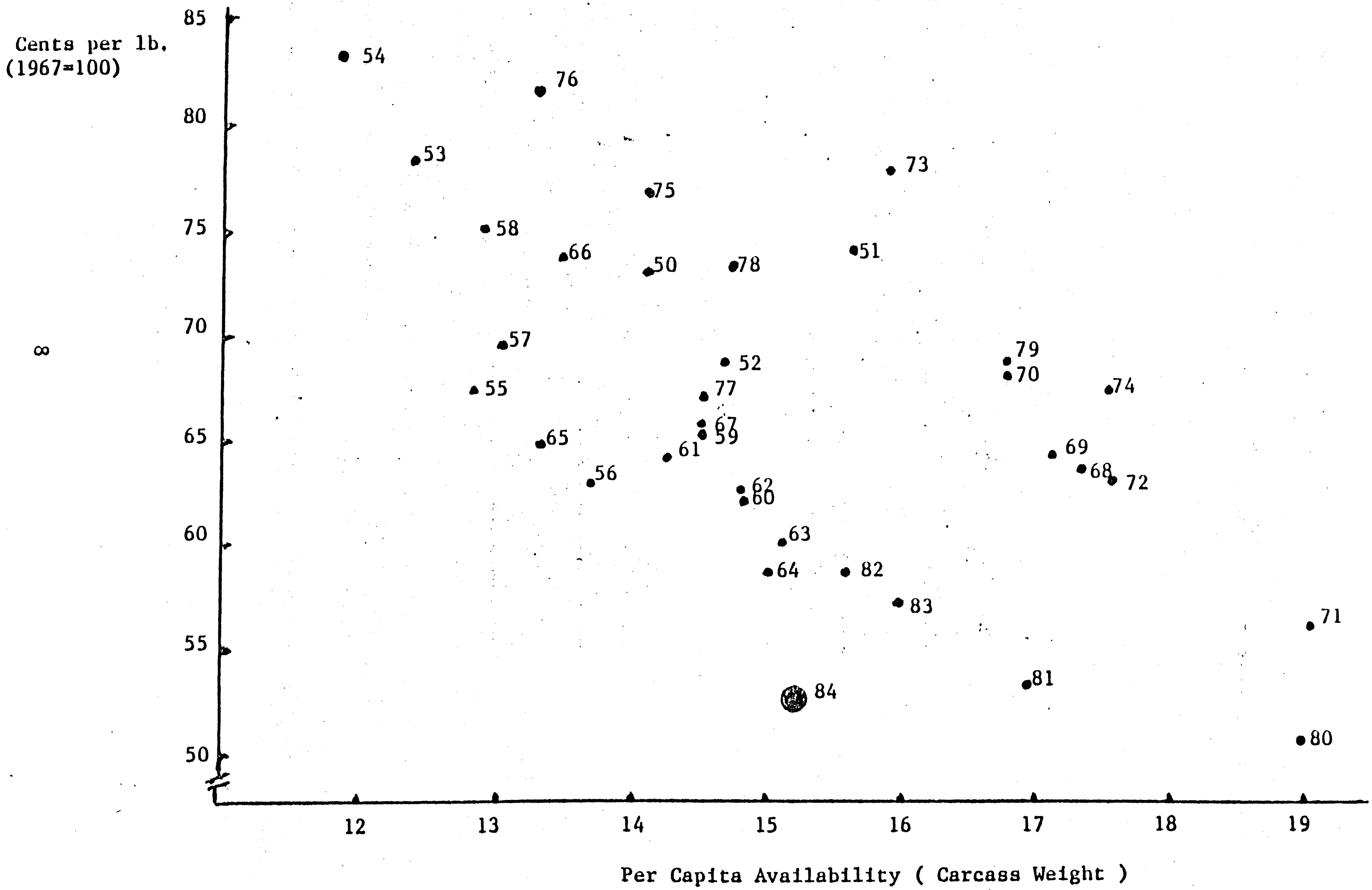
Figure 4 Deflated Retail Prices (CPI) and Per Capita Availability of Pork, Quarter II, 1950-84



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responded to the strong economic recovery. The coordinates for the second quarter suggest a continued pattern of movement into consumption only at lower deflated prices, especially for pork. Most outlook statements continue to talk about possible improvement in demand as consumers reap increases in real demand--but the improved demand does not emerge. Each quarter which passes and offers this same scenario is piling evidence behind the thesis that demand for red meats is no longer growing and, on a per capita basis, is now declining.

The Supply Side

The July 1 inventory report sets the supply side picture for beef. Table 2 records the data for 1983 and 1984. Numbers were generally 1-2% below 1983 levels, continuing a pattern of slow liquidation which began during calendar year 1980--after only two years of growth coming out of the dramatic liquidation of 1974-78. This pattern is likely to continue. With weaned calf prices below the ATC of production, the self-correcting forces of the market will continue to prompt liquidation. Continued liquidation is positive for long term prices, but liquidation means greater than normal slaughter from a given herd size--and short-term pressure on price.

Near-term cattle supplies will come primarily from the July 1 cattle on feed numbers. In the 13 major feeding states, the on-feed count was down 4 percent (Table 3). Fed marketings during the rest of 1984 will be down slightly. Per capita supplies for the rest of 1984 and into 1985 will be down 1-2 percent.

Table 2. July 1 Cattle Inventory

Class	1983	1984	1984 as % of 1983
	(1,000 head)		
Cattle and Calves	123,540	121,950	98.7
Cows, Heifers Have Calved	49,600	48,950	98.7
Beef	38,480	38,100	99.0
Dairy	11,120	10,850	97.6
Heifers 500 lbs., Up	18,570	18,600	100.0
Beef Replacement	5,800	5,600	96.6
Dairy Replacement	4,880	4.950	101.4
Other	7,890	8,050	102.0
Steers 500 lbs., Up	16,890	16,400	97.1
Calves Under 500 lbs.	35,970	35,500	98.7
Calf Crop	44,093	43,400	98.4

Source: Cattle, CRB, SRS, USDA, July 20, 1984

Table 3. Cattle on Feed, July 1, 1984, 13 States

Item	1983	1984	1984 as % of 1983
	(1,000 head)		
On Feed April 1	9153	9340	102
Placed Apr-June	5894	5572	96
Marketed Apr-June	5527	5630	102
On Feed July 1	9070	8700	96

Source: Cattle on Feed, CRB, SRS, USDA July 18,1984

Table 4 establishes the supply base for pork. June 1 numbers were down, but down less than expected. Pork supplies will run 7-10% below 1983 levels in late 1984, with the potential for price variability coming from production decisions of producers as we move toward harvest of a large corn crop.

Competing Meats

Price levels in pork and poultry are increasingly important to beef prices. During the remainder of 1984, pork production will be down significantly. Hog prices should hold at or above the $50 level into the winter months, with a price rally possible if herd expansion emerges again on the heels of a large corn crop. But the demand for pork is also faltering. With numbers about like those we saw in 1982, prices are well below 1982 levels. (Huge stocks of bellies in storage are a price depressing influence this year.) With increasing evidence pork is an acceptable substitute for beef, the two red meats will tend to move together.

Poultry production is expected to be up across the next 2-4 quarters. Broiler prices will be below year-earlier levels this winter, and this will not help demand for beef or pork. Competition from poultry will become more important. Note Chavas' results (Table 1) indicate a larger income elasticity coefficient for poultry than for beef.

Price Spreads

Changes in the price spreads can be as important as substantial changes in demand or supply. Most analysts have had trouble predicting the changes, but there does appear to be a

Table 4. Hogs and Pigs, 10 Major States, June 1, 1984

Class	1983	1984	1984 as % of 1983
	(1,000 head)		
All Hogs, Pigs	45,250	41,330	91
Breeding	6,224	5,735	92
Market	39,026	35,595	91
Market Hogs			
Under 60 lbs.	17,335	15,197	88
60-119 lbs.	9,415	9,024	96
120-179 lbs.	6,864	6,231	91
180 lbs. +	5,412	5,143	95
Sows Farrowing			
Mar-May	2,768	2,462	89
June-Aug *	2,400	2,009	92
Sept-Nov *	2,370	2,200	93
Pig Crop			
Mar-May	21,063	18,677	89

* Intentions

Source: Hogs and Pigs, CRB, SRS, USDA, june 21, 1984 seasonal pattern. In general, it appears the spread narrows during periods of tight supplies of fed cattle. Packers "give" a bit as they bid up cattle to keep the kill lines going. They tend to let the spreads widen during periods of relatively heavy fed cattle marketings. Prices at retail, and wholesale, often hold and live cattle prices dip. With fed marketings projected to be a bit lower later this year and into early 1985, I do not expect to see unusually wide price spreads emerge.

In pork, packers move into late 1984 with margins generally in the red. Relatively light supplies early in the year propped up cash hog prices, and packers bid aggressively in the second quarter for movement into storage. But the June report indicates summer and early fall supplies will not be all that tight, so I expect to see packers pressuring live hog prices during the rest of 1984.

Price Trends

Longer term, I expect to see continued periods of price problems until the herd size in cattle is pulled down. Such a demand-induced adjustment will be difficult. A big 1984 corn crop will cut feeding costs and delay liquidation of the herds, but further liquidation appears inevitable. The hog sector seems destined to continue moving through the production cycle. A cyclical break in hog prices during late 1985 is probable if cheaper corn this fall and decent hog prices prompt some expansion.

In the near term, fed cattle prices should continue to trade in the $60's. The chances for a $70 sustained market appear small, but the $70 level could be briefly challenged in the first half of 1985 if we do see gilt holding in hogs. Feeder cattle prices will be influenced by corn prices and interest rates. By quarters, the average price should be contained in the following ranges (Omaha prices):

		Fed Cattle	Feeder Cattle (600 lbs.)
1984	Q_3	$63-67	64-68
	Q_4	62-66	65-69
1985	Q_1	64-68	65-69
	Q_2	63-67	68-72
	Q_3	64-68	66-70
	Q_4	62-66	65-69

These price trends reflect continuation of the relative price stability of recent quarters. Several forces could exert significant influence on price patterns into 1985 and thwart the above expectations. Among the more important are what happens to interest rates and when and if we get renewed expansion in hogs.

In hogs, I look for a rally from early August levels. Seasonal pressure in the fourth quarter will be at least partly offset by the influence of corn prices well below $3.00. Expect some herd expansion in quarter 4 of 1984 and quarter 1 of 1985, with an increase in pork supplies emerging again in late 1985. By quarters, average prices (7 markets) should be contained in these ranges:

		Cash Hogs (7 Markets)
1984	Q_3	$53-57
	Q_4	49-54
1985	Q_1	50-55
	Q_2	48-53
	Q_3	47-51
	Q_4	45-49

Corn prices, interest rates, cattle prices, and the apparently volatile demand for pork will all inject uncertainty in this price arena.