

THERE IS NO RELATIONSHIP BETWEEN PQRS AND ANY MEASURE OF CONCENTRATION (18 MAY 2007)

1. We have submitted extensive evidence throughout the course of the Inquiry to demonstrate that there is no meaningful relationship between the level of local concentration in a particular area, and the Price, Quality, Range and Service (PQRS) offer at Tesco stores in that area.
2. We have analysed relationship between:
 - (a) local concentration, measured as the number of fascia with “one-stop shop” stores (stores above 1,400 sq. m) within 10/15 minutes of (urban/rural) Tesco “one-stop shop” stores;¹ and
 - (b) eight different measures of PQRS, namely: range (number of SKUs relative to the average for that store size); sales per staff member (as a proxy for service levels); number of customer facilities in store; local promotional and marketing discounts; stock availability; time since refurbishment; One In Front performance; and customer complaints.
3. In no case did we find any meaningful relationship between the PQRS measures and local concentration. By “meaningful”, we mean that the relationship was both statistically significant and had the sign (a positive or negative relationship, as appropriate) that would be expected if stores that faced more local competitors had a better PQRS offer.
4. Our analysis simply plotted each PQRS measure against concentration. For seven of the eight measures there was either no statistically significant relationship, or the relationship was in the opposite direction to the one that might be expected if the Competition Commission’s (CC) apparent hypothesis – that PQRS is lower where concentration is higher – were to hold. For the eighth relationship – availability – there was a small but significant relationship on the initial analysis. However, this relationship disappeared (became statistically insignificant) once store size was controlled for.
5. A number of comments have been made about our approach. Essentially the comments state that we found no relationship between the variables either because our analysis was not well-specified, or because the definition of the market we had employed was incorrect.
 - (a) **Individual measures might be hiding an aggregate effect.** It has been queried whether the fact that we were not observing a relationship at the individual level was hiding an effect at the aggregate level. We disagree with this view in principle – if no effect was seen for individual measures, there can be no effect in aggregate since the aggregate effect is the sum of the individual effects. To demonstrate this in practice we considered the effect of adding together the various measures that had a positive but insignificant relationship with concentration (adding together measures with the opposite effect could

¹ This approach mirrored that of the CC in the 2000 Inquiry and was without prejudice to our view that all grocery stores are in the same market.

only further dampen any effect). We found no meaningful relationship of this aggregate measure with local concentration.

- (b) **There might be an endogeneity problem.** It has been argued that there might be an endogeneity problem in the results since (as also argued in the CC's margin-concentration paper) firms may enter in response to PQRS levels, and so change the level of PQRS. We tested whether this was the case using population as an instrument for concentration. We continue to find no meaningful relationship between local concentration and PQRS.
- (c) **There might be omitted variables that were hiding a relationship.** It has been queried whether a relationship might be revealed by controlling for other factors, such as facilities, store size, number of staff, population, and demographic characteristics. We have included all these variables in our analysis. In no case do we find any meaningful relationship between any PQRS measure and local concentration.
- (d) **The measure of local concentration may be wrong.** The possibility has been raised that the measure of local concentration that we employed may be hiding a relationship that would emerge if other concentration measures were employed. As set out above, we used the fascia counting methodology that was employed in the Safeway inquiry. However, we have also tested three alternative measures of concentration – net sales area share, the HHI of net sales area shares, and the HHI of overall shares of store numbers – against each of the PQRS measures. In no case do we find any meaningful relationship.
- (e) **The measure of market definition may be wrong.** A query has been raised as to whether a relationship would be seen if the market definition employed was different. We explored six different measures of local market definition – 10, 15, 20, 25, and 30 minutes, and isochrones as defined by the SSNIP test. In no case was there any meaningful relationship between any measure of PQRS and any market definition.

6. Overall, we looked at 126 separate relationships between PQRS and local concentration. In each case, we found no meaningful relationship.

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