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Grower Funding of Cotton Promotion Increased Market Share - Implications for Woolgrowers

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Introduction

As noted by the Future Direction's Wool Taskforce (McLachlan 1999), consumer marketing and promotion of wool products is important. It is essential for maintaining high consumer demand for a product.

As the Taskforce notes (chapter 6.11 of main report), ***"It is more a question of who should be responsible (for promotion) – retailers and brand owners, or woolgrowers via compulsory levies."*** It is hard to disagree that this is a fundamental issue.

Several authors (Watson 1998, Piggott 1998, Beare 1998) have pointed out the following. Grower funding of wool marketing and promotion is only appropriate if the net benefit to woolgrowers of consumer marketing and promotion in the presence of grower funding is sufficiently greater than the net benefit of consumer marketing and promotion that would have occurred with no grower levy funding.

Apriori it is feasible that even if grower funded consumer promotion and marketing has a positive effect on demand for wool products, this could be at the expense of private firms promoting wool product on their own account. The net benefit of growers funding consumer marketing and promotion could then be diminished, due to the 'crowding out' effect (Watson 1998). On the other hand, the level of complementarity between private and grower funding might be increased by focussing grower funded marketing and promotion on fibre properties, performance and content, and by considering joint funding and implementation with brand owners and retailers.

Hill et al (1996) studied the net incremental benefit of woolgrower expenditure on consumer marketing and promotion of wool product, under various scenarios of fibre promotion and marketing. This is useful information since it gives a guide to whether the level of expenditure needs to be decreased or increased. However, it does not directly address the issue of whether woolgrowers should fund consumer marketing and promotion. Should it be woolgrowers, or should it be left to retailers and brand owners?

From the point of view of the wool growing industry, this should not be an ideological issue. Instead, it should be purely an economic issue for the industry. If grower funding of consumer marketing and promotion is likely to sufficiently increase demand, above the demand that would have occurred without grower funding, then this funding should occur. If sufficient increase is unlikely to occur, then grower funded consumer marketing and promotion should not occur.

However, in studying the net effect of consumer marketing and promotion on demand it is important to be aware of both the direct effect of consumer marketing and promotion on demand and the longer term effect of increasing consumer loyalty and bonding to wool products. In relation to the issue for the need of woolgrower funded consumer marketing and promotion the longer term effect on consumer loyalty and bonding might be more important, since this can potentially produce a large cumulative effect over time. Also, the effect of retailers and

brand owners exploiting opportunities to reduce marketing and promotion, because of increased marketing and promotion on behalf of woolgrowers, might be different in the long term compared to the short term.

It seems that the majority of previous economic studies on the benefit of woolgrower funded consumer marketing and promotion focus on the direct benefit (Hill et al 1996, Bureau Agricultural Economics 1987, Conboy 1992, Griffith and Goddard 1993, Kinnucan et al 1996). These studies model, at most, a few quarters of lagged effect of consumer marketing and promotion on demand. This is understandable, since there are difficulties in studying improvement in longer term consumer demand through increased product loyalty and bonding.

Some of the previous studies do estimate long term demand elasticities to grower funded promotion, but these are all extrapolations from relatively short term modelling of time series errors eg using autoregressive errors lagged over a few quarters. They are unlikely to detect improvements in longer term consumer demand which are induced by increasing product loyalty and bonding, and which are not fully reflected in short term increases in product sales.

An AWRAP discussion paper (Australian Wool Research and Promotion Organisation 1999) discusses some of the difficulties of using econometric models for estimating returns on investment from grower funded consumer marketing and promotion. The paper defends the position of AWRAP in rejecting the use of econometric time series models for this purpose.

There is a need to compare the demand for wool products with or without the intervention of grower funded marketing and promotion, over an extended time period. Such a comparison would seem problematic for wool since Woolmark and its predecessors have promoted wool product, in the major markets, throughout the developed world. The level of wool demand in the absence of any previous grower funded consumer marketing and promotion seems to be almost unknowable. It is possible that there would be no difference, but it is also possible that the demand for wool would have collapsed. One referee pointed out that the International Wool Secretariat has previously attempted this 'test and control' approach for wool, but this attempt was unsuccessful.

The Case of Cotton

Cotton is a useful case to examine since there has been considerable grower funded consumer marketing and promotion in some developed economies such as the USA, and yet virtually no grower funded consumer marketing and promotion in other developed economies such as Western Europe and Japan (Townsend 1998). In the other developed economies, such as Western Europe and Japan, consumer marketing and promotion of cotton products has been left to retailers and garment brand owners.

As Watson (1998) points out, care is needed when extrapolating results from other agricultural products. However, the dangers from extrapolation are less with agricultural products with more similar pipeline and usage, such as cotton.

In the USA a substantial domestic cotton consumer marketing and promotion campaign has been carried out since the mid 1970's, by Cotton Incorporated, a cotton producer organization. This cotton marketing and promotion is funded by a cotton grower levy, as well as a cotton import levy. The 1999 marketing budget, excluding a much smaller international marketing component, is around forty million US dollars (Cotton Incorporated 2000a). The marketing and promotion campaign is part of an integrated on-farm research, post-farm research, product development and marketing programme, not unlike that which is pursued by Woolmark. A history of Cotton Incorporated activities is available on their website <http://www.cottoninc.com/>.

A 1996 survey of international cotton promotion activities provided information on cotton industry promotion in other countries (Townsend 1998). The only developed country, outside the USA, to have grower funded promotion at a moderately reasonable level was Australia at about US\$250,000. Thus, we can compare the change in market share of cotton garments between developed economies with a history of considerable grower funded consumer marketing, and developed economies with no such history

Method

Data has been extracted on cotton market share, as a percentage of total fibre consumption, from Townsend (1998) for the regions of North America, Western Europe and Japan/Australia/New Zealand. North America is a reasonable proxy for the USA. For each of the three regions, market share was modelled as a linear or quadratic function of year using multiple regression, depending on whether statistically significant curvature was observed. The residuals were then examined for autocorrelation using correlograms, partial correlograms and the Durbin Watson statistic. The average annual market share increase, for each of the three regions, was then calculated analytically using the fitted model.

It would be expected that all the developed economies would have relatively similar access to cotton product development, alternative fibre promotion, and over the longer term relatively similar general macro economic development. Thus, it seems reasonable to expect that any large differences between North America and other developed regions in the change over time of cotton market share would largely be attributable to differences in the net effect of grower funded consumer marketing and promotion.

Of course this argument cannot be extended to differences in average market share since different regions have different climate, different culture and different history. The differences between regions in average market share can also be considered as a reflection of different demand structures between regions. However, these differences in demand structure are likely to have a weaker effect on differences between regions in changes of market share with time, and in fact there is evidence that elasticities of retail wool demand to Australian wool price are similar in different regions (Connolly 1992).

Results from Cotton

Results of the analyses are tabulated in Tables 1 and 2, and graphically illustrated in Figure 1. Examination of the correlograms and partial correlograms revealed no indications of autocorrelation or partial autocorrelation of the residuals. The Durbin Watson Statistics for North America and Japan/Australia/New Zealand were below the 5% d_U value but not the 2.5% d_U value. This was considered to be not of any concern to the validity of the model.

Table 1. Cotton Market Share Equations

<p>North America</p> <p>$D = 30.7 + 1.12 \times (Y - 1980)$ $rsd=1.40$ $(se=0.070)$ adjusted $r^2 = 94.2$, $DW = 1.30$</p> <p>Western Europe</p> <p>$D = 33.2 + 292 \times (Y - 1980) - 0.073 \times (Y - 1980)^2$ $rsd=1.21$ $(se=54.8)$ $(se=0.0138)$ adjusted $r^2 = 80.0$, $DW=1.83$</p> <p>Japan/Australia/New Zealand</p> <p>$D = 42.4 + 0.17 \times (Y - 1980)$ $rsd=1.48$ $(se=0.073)$ adjusted $r^2= 22.3$, $DW=1.36$</p> <p>Variable Definitions</p> <p>D = Cotton Market Share as a percentage of Total Fibre Consumption. Y = Year (1980,1981,...1996).</p>

Table 2. Average Annual Market Share Increase (% per Year).

	Average Increase	Standard Error
North America	1.12	0.070
Western Europe	0.37	0.060
Japan/Australia/NZ	0.17	0.073

Only Western Europe had a statistically significant quadratic response ($P < 0.001$). The P-value was greater than 0.5 for North America and Japan/Australia/New Zealand. The curvature of Western Europe is likely to be due to the poorer economic performance of Western Europe in the 1990's than the 1980's. A negative response to poorer economic performance would be expected since even cotton is, in relative terms compared to basic synthetics, a higher priced luxury fibre.

The average annual increase of cotton market share for North America was around 0.75 to 1.0 per cent per annum greater than the other two regions (Table 2). This effect was cumulative so that the total increase, from the beginning to end of the 17 year period of this analysis, in cotton market share for North America was about 15 percentage units greater than the cotton market share change of the other two regions (Figure 1). This effect can only be described as huge.

Figure 1: Cotton Market Share as a Percentage of Total Fibre Consumption

Discussion

Of course this is not a totally controlled experiment, and hence differences to the change in market share could be influenced by other factors. For instance, the improvement in cotton market share might have been greater if the economies of Western Europe had been stronger in the 1990's. Also, the higher average market share for cotton in Japan/Australia/New Zealand might have limited the potential for increases in market share within this region. Nevertheless, it seems difficult to envision that the huge difference in market share change between North America and other developed economies could be due to reasons other than the effect of grower funded consumer marketing and promotion. This is as close as possible to a controlled study in an industry setting.

Thus, this is strong prima facie evidence that sustained grower funded consumer marketing and promotion can have a large long term cumulative effect on consumer demand for manufactured garments made from a specific fibre. It is evidence that reliance purely on consumer marketing and promotion by retailers and garment brand owners, as occurs in Western Europe and Japan/Australia/New Zealand, is inferior in stimulating demand.

The increase in market share of cotton in North America being associated with grower funded consumer marketing and promotion is consistent with a major turn around in cotton market share in the mid 1970's (Dolling 1999). From 1960 to the mid 1970's cotton market share declined at a faster rate than it increased from that time. The turn around occurred following the initiation of the grower funded consumer marketing and promotion campaign of Cotton Incorporated (Cotton Incorporated 2000b).

It is not surprising that grower funded consumer marketing and promotion is effective since, in the United States at least, fabric content is the second most important information after price for garment purchase (Cotton Incorporated 1999a). It is more important than laundry instructions or country of manufacture. The least important information reported in the Cotton Incorporated study was the designer or manufacturer's name. The majority of women in the USA are prepared to pay more for cotton or silk, and a minority of women are prepared to pay more for wool garments (Cotton Incorporated 1999b). It would be reasonable to speculate that the importance of fabric content is an indicator of successful marketing and promotion of specific fibres.

Of course, the results presented do not provide an answer to the most appropriate level of funding for consumer marketing and promotion. Also, this study does not address the issue of how much the benefits in increased demand will be returned to individual growers as increased profit.

However, this study does provide prima facie evidence that a reasonably substantial grower funded marketing and promotion campaign can be very effective in stimulating consumer demand, above that which would occur from relying on retailers and brand owners. Determining the most appropriate level of funding would seem problematic since this would depend on the effectiveness of the marketing and promotion. This effectiveness would strongly depend on creativity, management, and circumstance. Perhaps the most important issue to be addressed by economists is the determination of the level of increased demand, for a given grower funding of consumer marketing and promotion that would rationally justify that grower funding.

Conclusion

The case of cotton indicates that sustained grower funded consumer marketing and promotion can have a large long term cumulative effect on consumer demand for manufactured garments made from a specific fibre. Reliance purely on retail and brand owner consumer marketing and promotion is far inferior in stimulating demand. These results together with the similarity of the cotton and wool production and marketing pipeline and their similarity of usage should be taken into account when deciding on funding options for consumer marketing and promotion of wool products.

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