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1 **Supply Chain Management. A 'first principles' consideration of its**
2 **application to wool marketing.**

3

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9

10

11 **Summary**

12

13 This paper examines the differential characteristics of commodities and products and their respective
14 marketing systems. It identifies the circumstances under which wool and/or its derivatives might be
15 classified as either a commodity or a product and argues that in today's dynamic consumer markets where
16 intangible factors are increasingly important purchase drivers, consumer value may be lost through the use
17 of inappropriate marketing systems. The paper examines the theory of supply chain management (SCM)
18 and proposes that the adoption of SCM may be a useful mechanism for dealing with these problems under
19 certain conditions.

20

21 **Keywords:** wool, supply chain management, marketing, product, commodity

22

23

24 **Introduction**

25

26 During the 1990's the various sectors of the world's wool production and processing pipeline have faced a
27 period of declining demand and correspondingly poor prices, a declining share of the world textile market
28 and changing consumer tastes, resulting in reduced household expenditure on clothing. The impact of these
29 changes has been acutely felt by the world's largest wool exporters, Australia and New Zealand, which
30 together account for 92% of world wool exports (IWS, 1997). In response to this period of environmental
31 uncertainty, major wool industry reviews were commissioned in Australia (Wool Industry Future
32 Directions Taskforce, 1999) and New Zealand (McKinsey and Company, 2000). Both reviews included
33 recommendations relating to the need for woolgrowers to get closer to their downstream customers, in
34 order to better understand their requirements for raw wool. In this sense the wool industry is beginning to
35 move from a production to a market orientation and hence mirrors changes in other agri-food industries
36 (Meulenbergh and Viaene, 1998). However, there are few concrete ideas on how to achieve this transition

37 quickly, efficiently and effectively and recent history is scattered with failed attempts on behalf of various
38 growers and grower groups, to add value to their wool in various ways (Seaman, 1998). This paper
39 examines the potential for supply chain management (SCM) as a means of bringing growers and processors
40 closer together in order to improve the competitiveness of the wool supply chain through the development
41 of a more consumer orientated approach to wool production and processing.

42

43 This paper examines the fundamental concepts of 'product' and 'commodity' (termed 'unit type' throughout)
44 in an effort to identify the attributes required in an effective marketing system for wool fibre. After
45 considering the definitions of 'product' and 'commodity', it examines which of these best fit the
46 characteristics of wool. The paper then examines the concept of SCM and comments on some important
47 misconceptions with respect to its application in the wool industry. Finally, it examines the potential impact
48 of a shift to SCM on the upstream chain members, that is, the woolgrowers.

49

50

51 **Commodities, products and markets**

52

53 Commodities can be defined as “materials in their natural state which are often termed ‘primary
54 commodities’” (Barker, 1992). They may be described readily and objectively, and hence purchased
55 without visual inspection, they are produced in large quantities, and are available from many sources. The
56 key factor driving the commodity purchase decision is price. In contrast, products can be described as “a
57 bundle of physical, service and symbolic attributes that satisfies consumers wants and needs” (Kohls and
58 Uhl, 1990). The important feature of this definition is the reference to consumer wants and needs, which are
59 not homogeneous and thus permit the producers of products to differentiate their offering in a number of
60 ways, in response to the needs and wants of specific consumer segments, and thereby reduce the influence
61 of price in the purchase decision. Moreover, commodities are physical materials only whereas a product
62 also consists of intangible attributes (for example, various aspects of service, safety, image, welfare
63 standards etc.) which may be of value to the consumer.

64

65 The concept of products meeting customer needs is developed further by Altmann (1997), who stresses that
66 the product must primarily solve the problems of the consumer, then those of the middlemen and finally
67 those of the producer. This differs from a commodity where the producer, determines the nature of what is
68 produced. From this, it follows that the formulation of a product’s characteristics must be shared between
69 the marketing system participants in order to meet consumer needs. To do this, effective communication
70 channels are required between the participants. However, in commodity markets, relationships and
71 therefore the level of communication between the stakeholders is weak, whereas in a more co-ordinated or
72 integrated marketing system it is (potentially) strong. These differences between product and commodity
73 markets are illustrated in Table 1.

74

75

Characteristics	Participant	Marketing system for:	
		Product	Commodity
Priority in determining value/characteristics	Consumer	High	Low
	Trader/Processor/Retailer	Medium	Medium
	Primary Producer	Low	High
Role of information		Determines quality through both 'tangible' and 'intangible' factors	Provides description
Relationships required in the market		Strong and multi-faceted	Weak and trading orientated
Market type		Differentiated/Unpredictable demand	Homogeneous/predictable demand
Industry Structure		Competition between supply chains	Competition between individual firms

76

Table 1. Differences between commodity and product marketing systems.

77

78 The importance of the determination of unit type is that it guides marketing system choice. When a product
 79 is treated as a commodity or vice-versa, a mismatch and resultant inefficiency occurs, with value lost
 80 through the inability to exploit or develop non-material aspects of the product such as service and brand as
 81 a commodity system does not allow efficient communication of these attributes and their implications.

82

83 The problem of marketing system mismatch are further developed by Fearne and Hughes (1998), where
 84 'unit type', marketing system, innovation and the structure of agriculture, typified by the family farm, are
 85 linked. They comment:

86

87 *"In a highly competitive market...characterised by over supply and a commodity orientation, innovation is the*
 88 *only long-term source of competitive advantage...The lack of product innovation is a feature of commodity*
 89 *markets. In the fresh produce industry, it is also a result of the proliferation of entrepreneurial (often family*
 90 *owned) businesses, in which the injection of creativity and an open mind – essential ingredients for innovation – is*
 91 *often lacking."*

92

93 Here, the implications of marketing system mismatch are further extended to include the failure of business
 94 drivers such as innovation. This interaction between 'unit type' and the market is also noted by Boehlje et
 95 al. (1998), below, who comment on the factors driving the change from a commodity market with minimal
 96 interaction between stakeholders, to a more interactive, co-ordinated form which trades products.

97

98 *"...in traditional commodity markets where specific attributes are not demanded, supplies are fully adequate and*
 99 *can be obtained from various sources, and information flow between the stages are minimal, traditional spot*
 100 *commodity markets can function quite effectively and efficiently. As one deviates from these conditions - which is*

101 increasingly the case with more specificity in raw materials and information flows, and with fewer potential
102 sources of acceptable supplies – various forms of negotiated coordination systems become more effective and
103 *necessary for efficient functioning of the production and distribution system.*”

104

105 Auction markets currently dominate as the preferred method of sale in the Australian wool and animal
106 industries. Despite their popularity, auctions perpetuate communication problems through the separation of
107 buyer and seller, producer and processor, by creating difficulties for both parties in understanding the
108 actions of the other (O’Keeffe, 1998). However, auction systems do not represent communication vacuums.
109 While almost all commodities, are regarded as homogeneous, they typically display significant variability
110 in product characteristics which are of importance to buyers. As a result, even in auction systems, sellers
111 use grading systems in an effort to improve price and to communicate this variability to buyers, the various
112 grades often being viewed as equivalent to quality (Carman, 1997). Grades lower buyer and seller search
113 and transaction costs and foster a more efficient price discovery mechanism (Kohls and Uhl, 1990). As a
114 result of this most marketing systems exist on a continuum between the extremes of pure commodity
115 trading on the one hand, and complete vertical integration on the other.

116

117 But what is missing from the auction system in some cases? To answer this, it is useful to consider
118 Altmann’s (1997) broad definition of quality, which while intended for food products, can easily be applied
119 to wool fibre. Quality is defined as the summation of objective quality (chemical and physical analyses)
120 and subjective quality that includes characteristics such as taste, enjoyment and satisfaction. Other factors
121 such as freshness and absence of toxic agents can be viewed in both an objective and subjective way. These
122 ‘hard’ and ‘soft’ or intangible product characteristics vary in importance, with consumer income being the
123 major driver in determining the balance between the two (see Figure 1), that is, at the high income end, the
124 intangible characteristics may be major drivers of purchasing decisions, while at the lower income end,
125 price is the major driver (Ray and Hughes, 1994; von Alvensleben, 1997) (see Figure 2).

126

127 **Figure 1. Changing consumer preference with economic growth (developed from von Alvensleben (1997)).**

128

129 As retailers and consumers become increasingly interested in and concerned about safety, provenance,
130 welfare and the environment, it is important to ensure marketing systems convey messages relating to these
131 intangible aspects, effectively. If they do not, the result is lost value for the consumer through a loss of
132 intangible identity as the product transits the marketing system.

133

134 This increased importance of ‘intangibles’ is captured well by Dagevos (2000) when he describes
135 tomorrow’s economy as one characterised by the importance of ‘emotion’, with ‘hard’ product
136 characteristics and price acting only as part-drivers of consumer choice. It is a process of transformation
137 from ‘real goods’ to ‘feel goods’. Quality and price are no longer enough to persuade people to purchase as

138 these characteristics are often in abundance and may no longer be a point of differentiation between
139 products. As a result, aspects of emotional, ethical, aesthetic or ecological origin, become important
140 influencers of purchase decisions.

141

142 These intangibles are having increasing impact on the farming sector, as over time market signals flow
143 more directly from the consumer to the primary producer (Shadbolt and Morriss, 2000). This change is seen
144 even in the simplest, least transformed, agricultural products, **with consumers becoming increasingly**
145 **involved with the food purchasing and consumption process (Viaene et al. 1998)**. Similar changes are being
146 seen in the wool industry, the recent marketing materials of Merino New Zealand, which feature images of
147 New Zealand's spectacular South Island high country, perhaps being the best example.

148

149

150 **Is wool a product or a commodity?**

151

152 Given the implications for marketing system mismatch discussed previously, it is important to determine
153 whether wool is a commodity or a product in a given situation. To do this, an assessment must be made of
154 the nature of the wool, its heterogeneity and the impact of intangibles.

155

156 It is clear that wool sits in a peculiar place. It is a raw material produced in an animal production system
157 and shares some characteristics with other animal-based and agricultural systems. As a fibre product
158 however, it competes in the textile and apparel, rather than food market. Some wool types compete at high
159 price-points where choices for consumer spending may not be between garments, but are set against other
160 discretionary consumer spending such as holidays, entertainment and consumer electronics. Other wool
161 types compete at lower price-points. Coupled to this is its presence in a market where fashion and other
162 intangible product characteristics appear to potentially have a significant influence on purchasing decisions.

163

164 With respect to heterogeneity, McKinsey and Company's (2000) recent inquiry into the New Zealand wool
165 industry was clear, stating;

166

167 *"Different types of NZ wool have very different markets and end uses. Understanding the major markets and the*
168 *competition that wool faces is the first step in assessing the potential for demand growth or the opportunities to*
169 *service more attractive market segments.*

170

171 The same diversity is evident in Australian wool and in the industry as a whole, the Wool Industry Future
172 Directions Taskforce (1999) stating that:

173

174 *“There is a tendency in general discussion to refer to the wool industry as though it were a single commercial*
175 *entity. It is not...It is merely the statistical aggregation of independent businesses. Those businesses are*
176 *characterised by diversity not homogeneity...The same is true of other businesses along the textile chain.”*

177

178 This diversity translates in the auction system to various premiums and discounts. However, the auction
179 system is unable to convey data relating to intangible attributes and there is increasing anecdotal evidence
180 underlining the importance of intangibles; for example the interest in eco- and organic wool. This view of
181 the importance of intangibles is further reinforced by data suggesting that the characteristics of Merino
182 wool apparel consumers include high GDP per head. They also have a cultural acceptance of wool, are
183 responsive to fashion and have a recognition of wool fabric qualities (Ward, 1998).

184

185 Despite all this, wool is treated largely as a commodity through the continued dominance of the auction
186 system as the point of communication between the on- and post-farm sectors. This fails to recognise the
187 need for holistic marketing systems that efficiently transmit market signals and add value through
188 preserving and identifying important intangible characteristics. Auctions further limit communication as
189 they entrench the adversarial ‘win-lose’ arrangement between buyer and seller. This arises as the sum of
190 value in the marketing system is fixed and the variability in income for individual stakeholders stems from
191 the division of value between members along the chain (O’Keeffe, 1998).

192

193 Given these problems, the task is to capture value through systems that allow effective communication and
194 the transmission of ‘hard’ and ‘soft’ product characteristics from raw material to the consumer. Supply
195 chain management is a potential mechanism for doing this.

196

197

198 **Supply chain management – what is it?**

199

200 To understand SCM we need first to look at the supply chains themselves. Supply chains can be defined
201 variously as:

202

203 *“The process of planning, implementing and controlling the efficient, cost-effective flow and storage of raw*
204 *materials, in-process inventory, finished goods and related information from point-of-origin to point of final*
205 *consumption for the purpose of conforming to customer requirements” (Council of Logistics Management, 1986)*

206

207 *“A network of connected organisations aimed at the fulfillment of specific consumer needs...in conjunction with*
208 *the fulfillment of needs of other stakeholders of such an entity” (Beers et al.1998).*

209

210 *“An integrated approach that aims to satisfy the expectations of consumers, through continual improvement of*
211 *processes and relationships that support the efficient development and flow of products and services from*
212 *producer to consumer” (DPIE, 1998)*

213

214 *“The planned, continuous improvement of processes and relationships that exist to support the movement of goods*
215 *and services through the physical chain” (DIST, 1998).*

216

217 Supply chain management is a general philosophical approach to developing the collaboration described in
218 these definitions and is sometimes referred to as ‘value chain’ management, to emphasise its role in
219 building value, focussing on the customer and being demand-led. For the purposes of this paper, supply
220 chains and value chains are considered to be the same, and the term ‘supply chain’ is used throughout.

221

222 Central to SCM is the dual flow of products and information, the drive to meet the needs of the consumer
223 and the importance of the relationships between participants in the marketing system. There is often a
224 tendency to focus solely on the immediate economic aspects when firms are building supply chains, as
225 typically these are the most accessible benefits initially. For example, initial cost savings of 5-7% are often
226 reported when firms adopt a supply chain management approach (O’Keeffe, 1997). However, this negates
227 the fact that following the establishment of a chain, its success will depend upon the building of
228 relationships with both internal colleagues and other firms (Janzen and de Vlieger, 2000). Chain
229 relationships must be truly two-way in nature and equally meaningful for both the buyer and the seller
230 (Chadwick and Rajagopal, 1995). As a result, social aspects such as trust, information transfer and learning
231 capability will influence the performance, development and survival of chains. This does not deny that
232 commercial drivers and goals are important, but rather sees aspects of relationship as central to sustained
233 competitive advantage, and the current view that organisations conduct their transactions based on
234 autonomous decisions, ignores their interdependencies with other organisations (Migchels, 2000).

235

236 Marketing system change is also driven by the fact that purchasers are realising the problems associated
237 with the traditional concept of maximising short-term gain, in an environment where suppliers are kept
238 guessing (information asymmetry). A better strategy is to work with the supplier so that they can act to
239 enhance factors such as on-time delivery, lead-time reduction, total quality management, flexibility and
240 new product introduction (Chadwick and Rajagopal, 1995) and it is often simple changes in these factors
241 which bring about the initial cost savings. However, these interactions also facilitate the flow of
242 information and resources between participants and the relationships themselves become a stable vehicle
243 through which to conduct further transactions and develop new products and chains (Migchels, 2000).
244 These differences in inter-organisational information exchange are detailed in Figure 2.

245

246 **Figure 2. Type and volume of inter-organisational information flows (Storer, 2000).**

247

248 A major impediment to chain formation can be the lack of willingness of the various actors to co-operate
249 effectively and their insufficient knowledge about methods of co-operation which ensure ‘win-win’
250 outcomes (van Beek et al. 1998). Often, chain members bring ‘philosophical baggage’ with respect to the

251 nature of markets and this interaction within them. This can be a problem and slow the process of change
 252 management as the change from a traditional to the SCM approach is marked as can be seen in Table 2.

253
 254
 255

Table 2. Differences between traditional and SCM approach in markets.

Factor	Traditional	Value Chain
Information Sharing	Little or none	Extensive
Primary Focus	Cost/price	Value/quality
Orientation	Commodity	Differentiated product
Power relationship	Supply Push	Demand pull
Organisational structures	Independent	Interdependent
Philosophy	Self interest	Chain optimisation
Individual organisational boundaries	Hard	Fuzzy
Supply chain boundary	Fuzzy	Hard
Points of inter-organizational contact	Few	Many
Mode of operation	Tactical	Strategic
Communication between stakeholders	Formal and slow	Informal and fast
Relationships between stakeholders	Low	High
Trust between stakeholders	Short-term	Longer-term
Knowledge diffusion amongst stakeholders	Low	High
Stakeholders/actors/players in the system	Many	Few
Organisational models employed	Predominantly mechanistic	Predominantly organic
Organisational visions and values among stakeholders	Different, diverse and divergent	More common, focussed and convergent

Source: DIST (1998); Newton (2000) citing Engelbart F.

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Not only is the change in outlook significant, but it needs to be realised from the start of any SCM project, that motives for the development of SCM systems are likely to vary between actors (Mäkimattila and Marttila, 2000). As a result, the implementation of chain management principles and the implications for the firms involved will vary between firms and between chains. Chain structures, the degree of coordination and an individual company's perception of its role will vary due to the factors detailed in Table 3.

Table 2. Impact of a SCM approach on various chain members.

Chain member	Role	Attitude	Knowledge
Retailer/distributor should be...	<ul style="list-style-type: none"> •The concept and formula leader •Translating consumer wishes •Moving from information protection to information sharing 	<ul style="list-style-type: none"> •Balancing cooperation and power •Providing continuity •Ensuring there is more than price (eg. supply assurance) 	<ul style="list-style-type: none"> •Investing in new IT technologies •Developing marketing and branding •Developing chain information and chain quality systems •Sharing with the production and processing partners
Processor/industry should be...	<ul style="list-style-type: none"> •Organising instead of following the chain •Branding and added value 	<ul style="list-style-type: none"> •Having an internal and external focus •Ensuring customer satisfaction paramount •Developing a process orientated business operations i.e. operate in teams •Based around external deliverables eg. (service the needs of a major customer) rather than work units based around internal functions 	<ul style="list-style-type: none"> •Tracking and tracing, logistics concepts •Ensuring efficient consumer response and shelf management •Developing product, concept and production innovation •Moving to chain management
Trader should be...	<ul style="list-style-type: none"> •Moving from trader to organiser of finance, logistics and information •Moving from information protection to information sharing 	<ul style="list-style-type: none"> •Moving from high margins to continuity •Moving from transaction oriented to long-term partnerships 	<ul style="list-style-type: none"> •Tuning demand and supply •Developing consumer marketing and micromarketing •Developing chain information and chain quality systems •Developing contract forming, price setting and business strategy
Primary producer should be...	<ul style="list-style-type: none"> •Moving from product to market orientation •Changing from all-rounder to specialist •Changing from daily to long-term planning 	<ul style="list-style-type: none"> •Moving from transaction oriented to long-term partnership •Developing new forms of horizontal cooperation •Ensuring they're customer and consumer orientated 	<ul style="list-style-type: none"> •Developing product planning and logistics •Developing new or strengthened skills in contract forming and risk management

Source: Newton (2000) from Frank Engelbart, Rijnconsult, June 2000.

266

267 Once a chain is established, a chain strategy must be chosen, around which the project is progressed. To
 268 guide this process, careful consideration and determination of the most appropriate strategy for a specific
 269 product is important. The literature details four chain strategies (Hagelaar et al. (1998); Newton, (2000))
 270 which mirror the cost, focus and differentiation strategies developed for individual businesses by Porter
 271 (1980):

- 272 1. Cost-leadership strategy: supply oriented. Tries to preserve the market share it already has. Products
273 remain unchanged but investment in machinery is required to comply with the standards set by the chain
274 partners.
- 275 2. Differentiation strategy: chain redefines and improves products, in order to meet the needs of a market
276 segment. Demand oriented.
- 277 3. Diversification strategy: chain designs new product ranges. Demand oriented.
- 278 4. Specialisation strategy: reverses the focus of the diversification strategy, narrowing the product range
279 to a few targeted products for a specialised customer base. Focuses on innovation and quality. Demand
280 oriented.

281

282 **Supply chain management – what it isn't**

283

284 Having discussed the nature of SCM, it is useful to briefly consider what SCM is not. It is important to re-
285 state that SCM is an overarching philosophy not a prescribed description of a marketing system. It is not
286 about eliminating marketing systems, as different products will be suited to the different systems that exist
287 along the continuum described earlier. Equally it is not about eliminating participants from the chain, as
288 while it is possible to eliminate the 'middlemen', it is not possible to eliminate the marketing functions they
289 fulfil. Their elimination requires the transferal of the function and therefore the associated costs, to
290 someone else (Kohls and Uhl, 1990). As a result each case of chain re-engineering should be considered on
291 its merits. To do this, the assessment process proposed by Boehlje et al., (1998) is helpful (see Table 4).
292 Three factors are described which should be considered when determining the appropriate marketing
293 system for a specific product or commodity, with high/low value allocated for each.

- 294 1. Asset specificity or uniqueness. This refers to the specialised nature of the human or physical assets
295 that are required to complete the transaction. The more unique or specialised the asset, the stronger the
296 inter-firm bond required to encourage investment.
- 297 2. Task programmability. This indicates that a transaction is well understood by all parties and is often
298 repeated and has predictable outcomes, without the need for discussions or negotiation.
- 299 3. Separability. This refers to the ability to determine and measure the value of the contribution and hence
300 reward for each player in the transaction. If it is easy to measure value creation at each stage of the chain,
301 the transactions are said to be separable.

302

303 **Table 4. Choice of marketing system based on asset specificity, task programmability and separability of performance**
304 **assessment and award incentives.**

	Low programmability		High programmability	
	Low asset specificity	High asset specificity	Low asset specificity	High asset specificity
Separable	Spot market	Long-term contract	Spot market	Joint venture
Not separable	Cooperation (strategic alliance)	Cooperation or vertical ownership	Inside contract (hybrid)	Vertical ownership

Source: (Boehlje et al., 1998)

305

306

307 **What might SCM mean for upstream stakeholders in the wool chain?**

308

309 To understand potential impacts of SCM, it is helpful to consider some of the problems currently faced by
310 the wool industry. A significant factor contributing to recent poor returns has been identified as the poor
311 level of productivity improvement. Annual productivity increases in Australia of between 0.5 and 1%,
312 compare poorly to 1.6% in beef and between 3 and 4% p.a. in the cereal and cotton industries (Ward, 1998;
313 Wool Industry Future Directions Task Force, 1999). In New Zealand, the report by McKinsey and
314 Company (2000) suggests a similar value of 1% p.a. for woolgrowers. Further analysis suggests these gains
315 have mostly come about through reduced labour use and deferred investment, rather than through
316 productivity gains or due to the impact of improved genetic material. More telling perhaps is the
317 comparison of these values to wool's competing synthetic fibre industries where annual productivity
318 improvements have been in the order of 5 to 6% (Ward, 1998).

319

320 Recent studies (O'Keeffe and Fletcher, 1998; Samson, 1999) have identified differences in management
321 practice and philosophy between high and poorly performing wool producers. The authors noted that the
322 ability of a farm to be a high or low performer was independent of land, rainfall and scale of enterprise.
323 Critical factors for performance included; leadership and decision-making, the presence of production and
324 business plans, the use of active risk management and product marketing, the holding of a customer focus,
325 managing sustainably with a high stocking rate, participation in groups and the use of consultants, the use
326 of information on new practices and farming techniques, a focussed breeding strategy, and the use of
327 quality control strategies (Samson, 1999). Other work (O'Keeffe and Fletcher, 1998) has identified that
328 while some farmers principally view woolgrowing as a business, many place their emphasis on its
329 'lifestyle' aspects.

330

331 Given the low levels of productivity gain in the wool industry and the established link between innovative
332 farm management practice and farm profitability, all available levers to enable innovation must be utilised.
333 Supply chain management potentially provides a useful pathway for the dissemination of best-practice
334 models (Newton, 2000), and Faulkner (1995) states that the nature of a true strategic alliance (or supply
335 chain) is to develop joint sustainable competitive advantage and to extend individual and joint core
336 competencies. When these circumstances are linked to those of being demand, rather than supply driven

337 (Janzen and de Vlieger, 2000) so that customers needs are clearly defined, as is the case with SCM, a stable
338 environment for innovation, productivity improvement and the reduction of price volatility is created.

339

340 So how might the adoption of SCM be useful in the wool industry? To answer this it is important to
341 examine the question from the point of view of the customer. From their perspective, a whole range of
342 product attributes may be valuable in a garment or other wool product and these can be placed into three
343 categories:

344 1. Those which are purely technical in nature (the 'hard' attributes), e.g. raw wool quality measures such
345 as mean fibre diameter.

346 2. Those which have both technical and intangible aspects, e.g. pesticide residues. These can be measured
347 but may carry a range of intangible attributes also, especially when terms such as 'organic' or 'eco-' are
348 applied.

349 3. Those which are entirely intangible in nature (the 'soft' attributes), e.g. imagery related to region which
350 adds some value in the consumers' minds.

351

352 It is this third category, the solely intangible, that deals with those factors where the auction system as the
353 only point of communication, has great difficulty conveying relevant information. This could relate to
354 factors as diverse as growing region (eg. New Zealand Merino and its associated imagery) or the expansion
355 of QA into animal welfare, as has been the case in other animal industries. It could relate to other factors
356 that add value for downstream chain participants, e.g. aspects of service such as holding of raw wool stock.
357 Information with respect to all these attributes is difficult to distinguish or is not available in the auction
358 system. They are better managed through a more interactive marketing system.

359

360 The critical decision point with respect to marketing system choice is whether further value could be added,
361 that is the customers' needs could be better met by moving to a more interactive or collaborative system
362 such as SCM. It is recognised however that SCM will not benefit all wool supply chains. While it can be
363 argued that wool is a 'product' (i.e. not a commodity) and has inherent heterogeneity, SCM approaches
364 appear most appropriate where the current marketing system does not transmit the required product
365 attributes, be they 'hard' or 'soft'.

366

367 For all members of the wool supply chain the implications of more widespread adoption of SCM principles
368 may be variable and depend upon the response of individuals and firms to this new way of doing business.
369 The shift from the 'win-lose' relationship to the 'win-win' is fundamental. Again, Kohls and Uhl (1990)
370 remind us that marketing functions cannot be eliminated, only transferred, therefore the impact on
371 individuals will depend on their ability to bring their core competencies into the more collaborative
372 business partnership. Where the current system does meet needs adequately, a move to SCM, with its
373 significant initial time/cost expenditures at start-up, and the ongoing challenge of building and maintaining

374 the relationships between supply chain partners, may not be warranted. However a less adversarial and
375 more transparent approach in existing systems, may bring cost savings in the short-term.

376

377

378 **Conclusions**

379

380 Given wool's position as a natural textile fibre, its high price relative to its competitors and its potential
381 vulnerability to fashion, there appears to be a case for the further development of the intangible product
382 characteristics of the wool fibre in an effort to better meet consumer demand. This is already occurring in
383 some sectors, but the commonly used marketing systems have not reflected this change and are potentially
384 unable to transmit these new and important product characteristics. Marketing systems are required which
385 effectively transmit both the 'hard' and 'soft' product attributes and do so with the aim of meeting the
386 needs of the consumer. An apparently effective way of gaining the coordination required to meet this goal,
387 where it is appropriate given the attributes of the product, is through the adoption of SCM principles.

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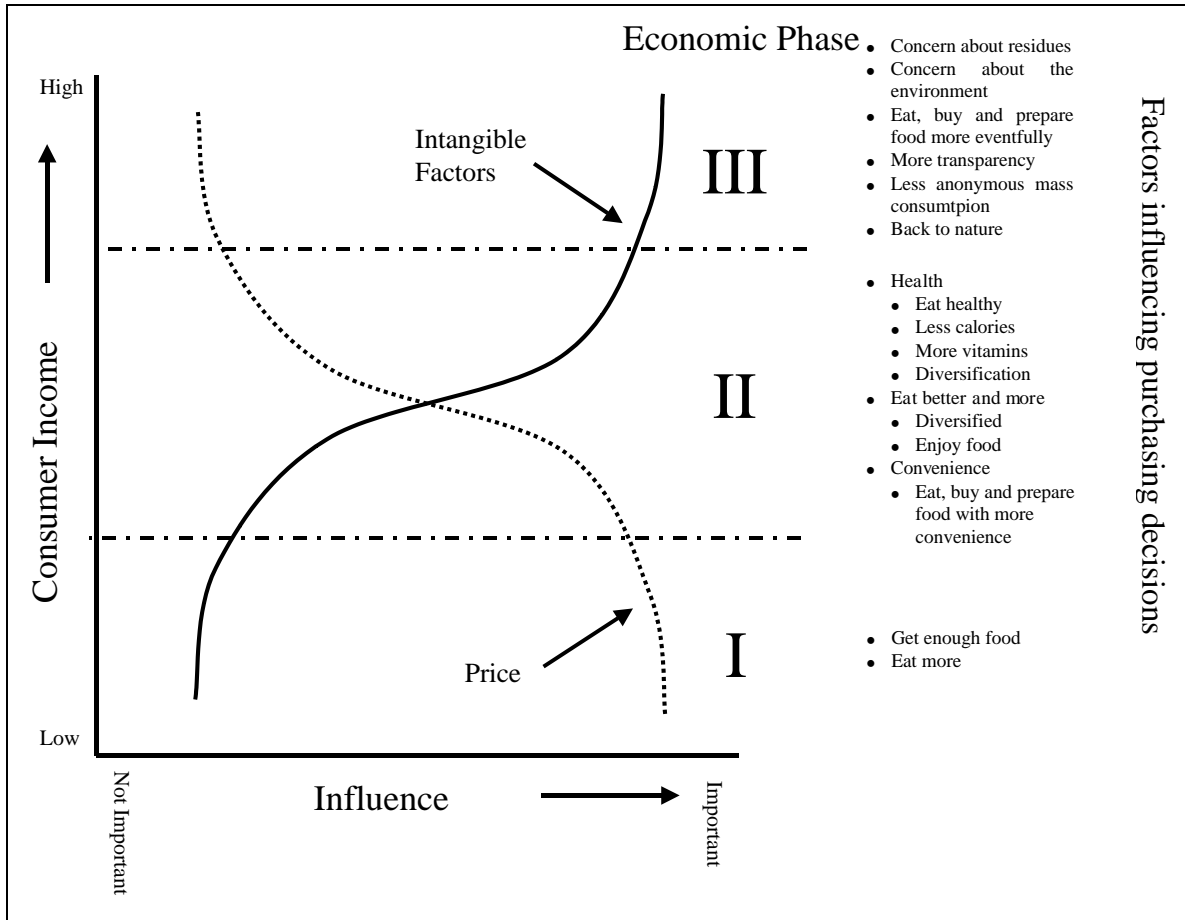
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490 **Figures**

491

492 **Figure 1.**

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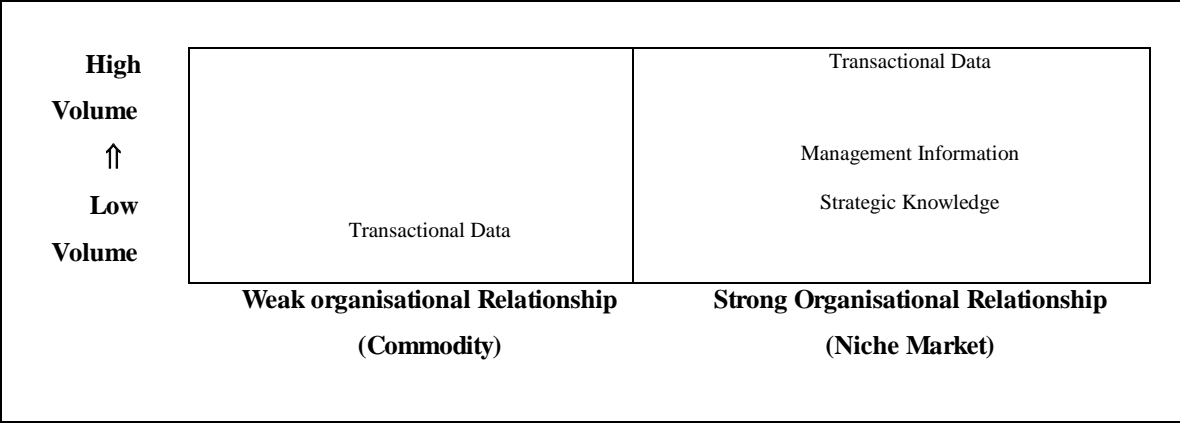
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497 **Figure 2.**

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