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A KNOWLEDGE-BASED SYSTEM
THAT GIVES BETTER PRICE RECOMMENDATIONS
THAN A GOOD MANAGER

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Massey University, in fulfilment of the requirements for the
degree of Doctor of Philosophy.

Approved by:



Dr A C Lewis,
Supervisor

TO WHOM IT MAY CONCERN

This is to state that the research carried out for my Ph.D. thesis entitled "A Knowledge-based System that Gives Better Price Recommendations than a Good Manager" in the Marketing Department at Massey University, New Zealand, is all my own work.

This is also to certify that the thesis material has not been used for any other degree.



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Date:

8/10/91

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ABSTRACT

The objective of this research was to investigate whether it is possible to construct a computer system that provides good price recommendations for marketers in the export wool industry. The computer system is a program that stores and makes use of expert knowledge in the course of providing recommendations to a user. "Good" price recommendations are ones that closely resemble those of a consensus of experts.

Fuzzy logic, a method of inexact reasoning, is used to derive recommendations from inexact rules in the system. The system allows users to input vague expressions used in natural language, translates them into nonfuzzy values and then performs a set of operations on them to produce a nonfuzzy recommended price.

The effectiveness of the system in making good price decisions was tested by comparing the system's recommendations with consensus recommendations from a panel of experts. The correlation coefficient between the system's recommendations and the consensus recommendations was found to be higher than any of the correlation coefficients between the individual manager's first recommendations and the consensus recommendations. This suggests that the system constructed is capable of providing good price recommendations.

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