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Application of Artificial Intelligent on Consumer's Behavior

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Abstract
This study presents an artificial intelligent model for understanding purchase intention for consumers. An intelligent system was developed and conducted to test the model. The results indicate that consumer's participation has a positive impact to purchase. Consumer's orientation has a positive impacts on purchase intention. Consumer's normative commitment, consumer's continuance commitment, and consumer's affective commitment positive impact to purchase behavior. According to the results of empirical study, implications and suggestion for future research are discussed.
Keywords: *Artificial intelligent；Commitment；Consumer's behavior*

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I. Introduction

With the growth and rising of popularity of Internet, it has dramatically influence on business and the way consumers purchase products or services[1]. Currently, there are firms utilize the benefit of Internet to extent their business increasingly[2]. The relatively low costs related to selling product or services on the internet make it profitable and more effective for sellers. Online sellers reduce the costs including maintaining the products in store and rent cost for expensive urban or suburban real estate and costs on in-store salespeople [3]. As a result, many retailers and store owners start to sell service or products online [4]. Internet attracts consumers to purchase online instead of shopping in store because internet makes it flexible for people to search information across countries to countries whenever they are willing to do. It turns out that customers search for products, compare to the quality in different online stores, order and pay for the items all through the Interne [5] [6] [7].

II. Materials and Methods

Pandey, and Mishra [8] have hierarchically structured the neuromuscular diseases in terms of their physio-pyscho (muscular, cognitive and psychological) parameters and EMG based parameters (amplitude, duration, phase etc.). Kohl, and Risto Miikkulainen [9] evaluate the hypothesis that such problems are diff icult because they are fractured: The correct action varies discontinuously as the agent moves from state to state. Costantino, and Gravio propose the implementation of an intermediation model in supply chains, integrating game theory and fuzzy logic, to represent the characteristic aspects of a bilateral bargaining with incomplete information where supplier-customer relationships are indirectly managed by a third party agent.

2.1 Nero-Fuzzy system

Figure 1 shows the framework of neuro-fuzzy system, and the system is divided into four steps [10] [11].

Step 1: Define the number of control variables for the fuzzy controller, and centers for each input and output fuzzy variable. In this study, the input fuzzy variables are (A1, A2, . . . , AP), and the outputs are (B1, B2, . . . , Bq). Ai (i =1, . . . , p) and Bj (j=1, . . . , q) are the fuzzy values. There are p x q possible fuzzy rules to describe the rule Ai to Bj.

Step 2: Define maximum and minimum values for each Ai and Bj, and thus the upper and lower bounds (width) of each fuzzy variable for a possible fuzzy control rule are defined.

Step 3: The input and output nodes are NAi and NBj (the character N is used to distinguish these from the variables of the fuzzy control).

number of input nodes p is the sum of the input and output control variables. The number of output nodes q is the maximum value of all possible fuzzy rules, and is always set as the product of the numbers of input and output fuzzy sets.

Step 4: The NN is trained by the CL-AVQ algorithm presented below. Then, by calculating the number of weight sets (i = 1, 2, . . . , p) that fall into each grid, and those grids that have larger numbers are selected as the fuzzy rules.

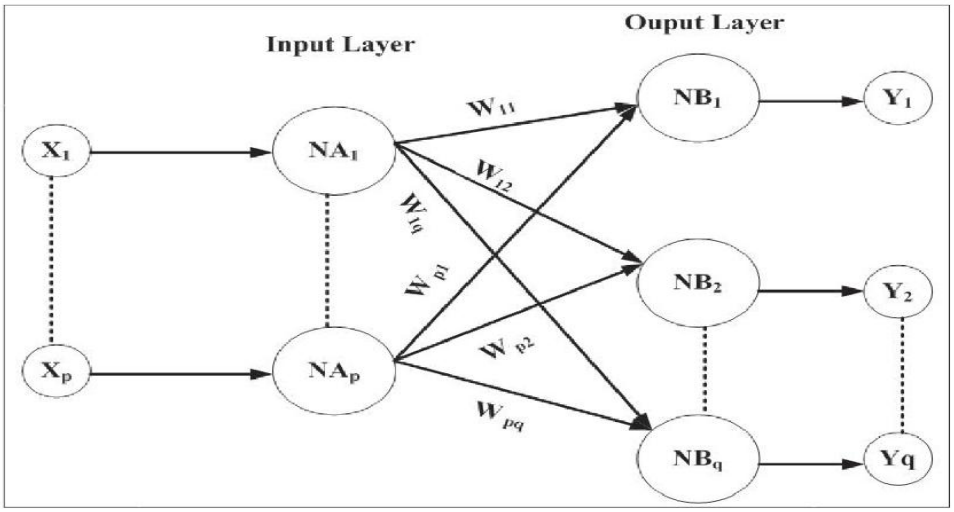

Figure 1. Framework of Neuro-Fuzzy system

2.2 Research Model

Figure 2 is the research model of this study.

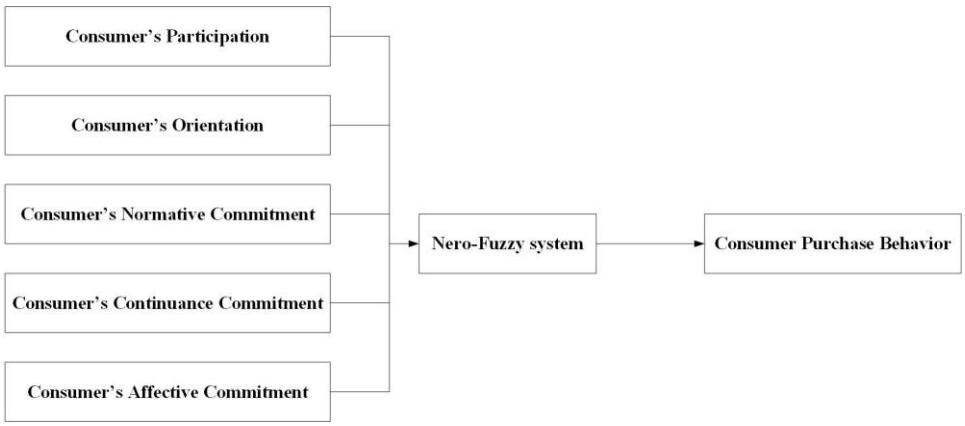

Figure 2. Research Model

III. Conclusion

We conduct a field study to develop our understanding of how consumer's participation, consumer's orientation, consumer's affective commitment, consumer's continuance commitment, and consumer's normative commitment impact consumer's purchase behavior through Nero-Fuzzy system in an organizational context. Our goal in this research is to document the association between consumers and retailers. We find Nero-Fuzzy system has a strong impact on consumers and retailers. We might this understanding inform managers about appropriate strategies for consumers as part of a retailing strategy for the business. Managing customer relationships are strategically important for retailing vendors, and they can be instrumental creating business value.

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