

## Conference Paper

# Consumer Innovativeness: Literature Review and Measurement Scales

Rini Kuswati and Irmawati

Economic and Business Faculty, Universitas Muhammadiyah Surakarta, Jl. A. Yani Tromol Pos I,  
Pabelan Surakarta, Indonesia

## Abstract

Consumer innovativeness is the degree to which the innovative is received independently. Innovativeness is also defined as the degree to which individuals (other adoption units) adopt new ideas faster than other members in a system. The aims of this article are to provide the literature reviews of consumer innovativeness concepts along with the measurement scales. The term consumer innovativeness is very diverse, depending on the research contexts. Consumer innovativeness is adopted on online shopping behaviours, eco-innovative adoptions, eco-friendly consumer behaviour, pro-environmental behaviour, etc. The level of consumer innovativeness concept is differentiated into two levels; general and specific level. General level of innovativeness includes global innovativeness and innate innovativeness. Specific level is known as domain-specific innovativeness. The different concepts and terms cause differences in the measurement. This article also examines innovativeness in individual and organizational unit analysis. Various definitions of innovativeness with diverse views are presented.

**Keywords:** Consumer innovativeness, global innovativeness, domain-specific innovativeness, measurements

Corresponding Author:

Rini Kuswati  
rk108@ums.ac.id

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## 1. Introduction

The debates on consumer innovativeness construct have been discussed by many researchers. Hirschman states that there have been weaknesses in investigating the relationship of innovativeness, which concludes that innovativeness has existed in human since birth and assumed to be constant in an individual [9]. In fact, innovativeness found to have quite strong relationship with some variables such as level of education, type of work, urbanization [28], personal characteristic [13], product knowledge [6], time and cultural orientation [20], and new product original [17]. Thus, the opinion

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states that innovativeness is a constant condition that has existed in human since birth seems to be weak. The situational impact on innovativeness is quite significant from some researches. Hirschman [9] said that the influence of social environment contributes to form innovativeness so it is not merely constantly genetic. Two groups with different opinions are the basis of the questions for researchers that focus on the construct of innovativeness. Is innovativeness a dispositional personality element or situational personality element with attitude approach?

The debates have not achieved to be consentaneous as stated by Midgley and Dowling [22]. Relative theory or dispositional theory emphasizes that innovativeness is merely a reaction to internal factors that have been in an individual since birth. This theory is also known as traits-behaviour model. Meanwhile, attitude theory or situational theory emphasizes that consumer innovativeness is a reaction to situational extrinsic factors in addition to factors within an individual. This theory is known as attitude-behaviour model.

## 2. Theoretical Background of Innovativeness

The construct of consumer innovativeness is related to new product adoption context [19]. This innovativeness concept is not relatively stable due to various perspectives in defining and measuring the construct. Hirschman and Midgley & Dowling, develop innovativeness concept from the nature process of new product adoption, known as consumer behaviour domain [9, 22]. One of the innovativeness terms is innate innovativeness. Innate innovativeness is the degree to which individuals receive new ideas and make innovative decisions independently, from communicated experiences of other individuals [22]. Hirschman [9] explains innovativeness through information seeking concept about the innovation in variety seeking. Innovativeness is defined as a desire to find new and different things [9].

Consumer innovativeness can be reviewed from some theoretical approaches. First, the trait theory approach or traits-behaviour model, which reviews innovativeness as a genetic trait of an individual and it is derived from birth [8, 9, 22, 28, 30]. Second, the attitude theory approach known as situational theory approach or situational-behavioural model. The approach explains consumer innovativeness as a part of social constructions that affects the high or low degree of consumer innovativeness. Based on attitude theory, consumer innovativeness can be influenced by external factors of individual or group. The factors include situations such as environment and the attitude of individuals or other groups. Thus, consumer innovativeness is a part of learning

process influences of individuals through cognitive process, so that it forms different degrees of innovativeness that varies between individuals. Third, both previous approaches which known as contingency or interaction model [9, 22].

The attitude theory which used to explain consumer innovativeness is social cognition theory [2]. It explains that the formation of behaviour is a connection between personality, situational or environmental factors and the behaviour itself. An individual can be influenced by environment and his internal conditions in forming the degree of innovativeness in individual level. Furthermore, individual innovativeness may be influenced by the degree of innovativeness in group level. Strong group innovativeness tends to have strong identity as well, so it has a great impact on the degree of individual innovativeness according to social identity theory [31].

TABLE 1: The Concepts and Theories of Innovativeness Construct.

Concept (Theory)	Innovativeness Construct	Research Context
Individual consumer innovativeness as personality trait (Trait Theory) Individual analysis level	<b>Life Innovativeness:</b> [12, 14, 16] <b>Adaptive Innovativeness</b> <i>Innate innovativeness:</i> [10, 30] <i>Innate innovativeness is expressed as a stimulation need:</i> [24, 26] <i>Innate innovativeness is expressed as novelty seeking:</i> [9, 15, 23, 33] <i>Sensory innovativeness:</i> [33] <i>Innate innovativeness as an independent judgment:</i> [14, 21, 29] <i>Innate innovativeness is expressed as a need of uniqueness:</i> [7] <i>Personal innovativeness:</i> [1, 29] <i>Global innovativeness:</i> [5, 20, 32]	New idea adoption New product adoption, Innovative product purchase IT adoption. Pro-Environmental behaviour Green product consumption behaviour Online banking adoption
Individual consumer innovativeness (Attitude Theory)	<i>Domain specific innovativeness (DSI):</i> [8] <i>Cognitive innovativeness:</i> [33]	New product adoption
Group consumer innovativeness (Attitude Theory)	<i>Organization innovativeness:</i> [27, 34]	New product introduction
Source: Author's own work, 2018		

## 2.1. Level of innovativeness

Level of innovativeness is divided into two levels, general and specific level. General level emphasizes general concept, and specific emphasizes specific construct which directs to more specific innovativeness. There are some constructs which categorized as general level of innovativeness are global innovativeness, innate innovativeness, consumer innovativeness, sensory innovativeness, cognitive innovativeness, personal innovativeness, and life innovativeness. While specific level of innovativeness includes

domain specific innovativeness. Therefore, to predict general behaviours, researchers can choose general concepts. Conversely, if researchers want to predict specific behaviours, they should use specific concepts. These levels are important to be studied because researchers need to determine the same level in order to analyse the relationship of two constructs. For example, if researchers want to measure specific behaviour of new IT adoption such as smartphone, the level innovativeness should be specific that leads to innovativeness context of the use of smartphone. Some researches imply show that the results of insignificant relationship may be caused by the use of general construct perception which used to predict specific behaviours.

Furthermore, unit of level analysis of innovativeness construct is also divided into two levels. The levels are individual innovativeness level and group or organizational innovativeness level. Some researches still use the same unit of analysis level in examining both individual and organizational innovativeness. However, it is interesting for researchers to conduct cross-level analysis and multi-level analysis of innovativeness construct. For example, researchers can analyse the effect of organizational innovativeness on the individual innovativeness performance. This opportunity is challenging because there has been few study that analyses cross-level or multi-level analysis of innovativeness.

### 3. Conceptual Definitions of Innovativeness

Innovativeness concept in marketing theory recognizes some levels of innovativeness, including: individual innovativeness, team innovativeness and management innovativeness [34] or organizational innovativeness [25, 27]. The defines of group innovativeness is the ability of a group in adapting to do some changes. While [25, 27] defines organizational innovativeness as the desire, tendency and ability of an organization to get involved in it, support new ideas, findings, experiments and other creative processes that generate innovation. Organizational innovativeness is measured by some dimensions such as: product innovativeness, market innovativeness, behavioural innovativeness, process innovativeness, and strategy innovativeness [34].

Innovativeness, by some researchers, has been defined from 70s to 2000s in various concepts. The diversity of concepts has emerged differences in the term innovativeness. However, the term contains similar meanings. So, innovativeness is a concept similar to inherent novelty seeking, life innovativeness, global innovativeness, innate innovativeness, etc., as presented on Table 2.

TABLE 2: Definitions of Innovativeness.

Year	Applied by	Construct	Definition
1970	Pearson [23]	<i>Inherent novelty seeking</i>	Internal impulse or motivation that encourages individuals to seek new information.
1971	Rogers and Shoemaker [28]	<i>Innovativeness</i>	The degree to which individuals are relatively earlier in adopting an innovation (new idea, new practice, or object perceived as new by them) than other members in their system
1975	Leavitt and Walton [16]	<i>Life innovativeness</i>	Innovativeness as a trait marked by intelligent, creative and selective in communicating to get problem solutions.
1976	Kirton [14]	<i>Global innovativeness</i>	Personality trait owned by all individuals with different degree.
1977	Hurt [12]	<i>Innovativeness</i>	Innovativeness is a willingness to change
1978	Midgley and Dowling [22]	<i>Innate innovativeness</i>	The degree to which individuals get new ideas and make innovative decisions independently, without communicated experience of others.
1980	Hirschman [9]	<i>Inherent novelty seeking</i>	As internal impulse or motivation
1990	Venkatraman and Price, [33]	<i>Sensory innovativeness</i>	Tendency to get involved in internal pleasure experience (fantasy, dream or stimulation)
1990	Venkatraman and Price, [33]	<i>Cognitive innovativeness</i>	Tendency to get involved in new pleasure experience (both internal and external) which affects individual's thought.
1991	Goldsmith and Hofacker, [8]	<i>Domain Specific Innovativeness (DSI)</i>	DSI is an intermediary between innate innovativeness and innovativeness behaviour. DSI is tendency to learn and adopt innovative product (new product)
1999	Steenkamp <i>et al.</i> , [30]	<i>Innate innovativeness</i>	Predisposition in purchasing new product and brand, and different with the previous product choices and consumer purchasing patterns.
2003	Rogers [29]	<i>Innovativeness</i>	The degree to which individuals or other adoption units are relatively earlier in adopting new ideas than other members in a system.
2004	Wang and Ahmed [34]	<i>Organization innovativeness</i>	Organizational innovativeness as the desire, tendency and ability of a group to get involved in it, support new ideas, findings, experiments and other creative processes that generate innovations.
2004	Roehrich, [26]	<i>Consumer Innovativeness</i>	<i>Consumption of newness</i>

Source: Author's own work, 2018

## 4. Measurements of Innovativeness

Some measurement tools of innovativeness construct are global innovativeness, domain-specific innovativeness and measurement innovativeness from Raju [5, 8, 26]. Measurement scale used by previous researchers was likert scale 1-5.

### 4.1. Global innovativeness [5]

TABLE 3: Measurement of Global Innovativeness.

Affinity of new Idea	I like being exposed the new ideas. I am Generally open to accepting new ideas I am willing to try new things I feel that I am an innovative person I constantly find new ways of living to improve over my past ways.
Early product adoption	I am eager to buy new products as soon as they come out. I relish the gamble involved in buying new product I enjoy the novelty of owning new products.
Distrust of New Products.	New product has an unacceptably high price Products are getting shoddier and shoddier. Many new products allow firms or governments to spy on individuals. Purchasing new products takes too much time and effort.
Source: [5]	

### 4.2. Domain-specific innovativeness (DSI Scales)

Item samples of DSI Scale, with 5 Likert Scales [8].

In general, I am the first in my circle of friends to buy a new digital/compact camera when it appears.

Compare to my friends, I own lot of digital/compact cameras.

I will not to buy a new digital /compact camera if I haven't tried it yet.

I do not like to buy digital/compact camera before other people do.

If I heard that new digital/compact camera was available in the store, I would not be interested enough to buy it.

In general, I am the first in my circle of friends to know the brands of the latest digital/compact camera.

### 4.3. Roehrich's innovativeness scales [26]

TABLE 4: Roehrich's Innovativeness Scales.

Hedonist innovativeness	I am more interested in buying new than known products I like to buy new and different products New products excite me
Social innovativeness	I am usually among the first to try new products I know more than others on latest new products I try new products before my friends and neighbors
Source: [26]	

## 5. Conclusion

Innovativeness is a construct which is available for measurement tests. Some concepts and definitions of innovativeness can be used as references for researchers in conducting a research related to innovativeness on new products or ideas adoption behaviours such as pro-environmental behaviour, sustainable consumption behaviour, eco-innovative behaviour, etc. The three measurements above are examples of innovativeness measurements which have been developed by researchers. These measurements can be used as alternative measurement of innovativeness for researchers, depend on the research contexts.

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