

SYSTEMATIC LITERATURE REVIEW: WILLINGNESS TO PAY FOR CONSUMERS TO ORGANIC RICE

Khotimatul Barki¹ 

Malinda Aptika Rachmah^{*2} 

¹Student of Postgraduate Program of Agribusiness, Faculty of Animal and Agricultural Science, Diponegoro University

²Lecturer of Agribusiness, Faculty of Agricultural, Jenderal Soedirman University

Email: khotimatulbarki@students.undip.ac.id¹; malinda.aptika@unsoed.ac.id²

ARTICLE HISTORY

Received:

05 March 2023

Revised

30 April 2023

Accepted:

13 May 2023

Online available:

29 May 2023

Keywords:

Organic Rice,
Willingness to Pay,
SLR (Systematic Literature
Review)

***Correspondence:**

Name: Malinda Aptika R.
E-mail:
malinda.aptika@unsoed.
ac.id

ABSTRACT

Introduction: Organic rice is a food product that is cultivated organically, does not contain chemicals and pesticides, and has a high nutrient and antioxidant content. This study aims to 1) find out the method used to collect data about consumers' willingness to pay for organic rice, 2) find out the method used to measure the level of willingness to pay for organic rice, 3) find out the factors that influence consumers' willingness to pay for organic rice.

Methods: The method used in this study is the SLR (Systematic Literature Review) method with PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis).

Results: The results showed that 1) the highest frequency in data collection techniques was carried out using questionnaires and interviews (460 respondents), 2) the highest frequency in data analysis was using the CVM (contingent valuation method), 3) the most frequent category of factors influencing WTP, namely price product.

Conclusion and suggestion: The more research questions answered in published journals, the more data collection methods, methods of measuring WTP, and factors that influence WTP are often used in research.

INTRODUCTION

Rice for the people of Indonesia is a staple food and has a role in stabilizing Indonesia's economic growth. Indonesia as an agricultural country has various natural resources and a large agricultural area. Agriculture has a big role in helping Indonesia in the economic sector and helping fulfill the basic needs of food for the community. According to survey data conducted by BPS, the total population of Indonesia in 2020 is

270,203,917 people (BPS, 2020). The higher the population growth in Indonesia, the more food consumption will also increase. The total population in Indonesia has increased every year. At present, the awareness of the Indonesian people about healthy living is increasing. People are starting to realize the importance of maintaining a healthy lifestyle so that people are more selective in choosing the food they eat (Rofiah et al., 2020).

The growing public interest in organic products, especially organic rice, is the result of increasing awareness of the environment and food safety in Indonesia. One of the most widely consumed organic products is organic rice. Organic rice is a food product that is cultivated organically, does not contain chemicals and pesticides, and has a higher nutrient and antioxidant content. Organic rice is healthier and better than conventional rice but has a relatively higher price. Some of the advantages of organic rice include: a) rice is cultivated without pesticides and chemical fertilizers, b) free from genetic engineering products, c) free from preservatives, fragrances, bleach, and other harmful chemicals, d) processed using environmentally friendly agricultural technology, e) the aroma and distinctive taste image are more fragrant, fluffier, and not easily spoiled, f) organic rice has a higher nutrient, fiber, and vitamin-rich content (Waryat and Handayani, 2017).

Organic rice has a higher selling price when compared to conventional rice because organic production costs are higher than conventional products and organic rice requires costs for organic certification (Gil et al., 2001 in Sari et al., 2020). It is because of this obvious price difference that today's consumers still choose to consume conventional rice even though the level of awareness regarding food safety and health is already high. Price is the most influencing factor in consumer purchasing decisions for certain products. In this case, price is an important variable that has a real influence on consumers' decision to buy organic products, especially organic rice (Abadi and Herwin, 2019). The existence of this price difference needs to be known about the highest limit of consumers' ability to pay for an item or commonly referred to as willingness to pay. The concept of willingness to pay is the maximum price consumers are willing to pay to obtain goods and services. Willingness to pay is used to determine consumers' ability to pay for products with the aim of improving environmental conditions and knowing the factors that influence willingness to pay is able to help achieve the desired goals (Celona, 2015 in Arimurti et al., 2021).

LITERATURE REVIEW

The Basic Concept of Willingness to Pay (WTP)

Mankiw (2012) defines willingness to pay (WTP) as a picture of the maximum amount of money a buyer will pay for an item. The amount of money depicted in the WTP is the highest amount of money and can be paid, and individuals can receive and get utility

products (Munene, 2006). Generally, the amount of money paid by consumers or individuals is an indicator of the utility obtained from certain goods or services. It is assumed that the greater the utility received by consumers or individuals for certain goods or services, the greater the willingness to pay for these goods or services (Nababan, 2008). WTP reflects the value of a product or service that requires sacrifice to get it (Simoson & Drolet, 2004). Amelia (2016) also stated that WTP is the highest price a person (consumer) is willing to pay to obtain a benefit in the form of goods or services and is used as a benchmark for how much potential consumers value these goods or services. WTP appears as part of an activity to interpret a value in the eyes of consumers and functions to identify prices that consumers are willing to buy to get an idea of the level of quality attached to a specific price and utility level, and can also be used as a basis for determining product prices (Lusk & Hudson, 2004).

According to Miller and Mills (2010), the willingness to pay has three indicators, namely:

1. Lifestyle

Lifestyle describes a person's behavior, namely how a person can use money and make good use of his time. Lifestyle refers more to the description of one's interests, activities, and opinions. Lifestyle is a frame of reference that a person uses in behaving and the consequences will form certain patterns of behavior, especially how one wants to be perceived by others, so lifestyle is closely related to how a person forms an image in the eyes of other people (Purwaningsih, 2009).

2. Behavior

Behavior in the WTP indicator refers more to the willingness to spend more money in buying a product. This is an intention to take action to buy a product. Intentions and desires are a process of selecting one of several alternatives that have been considered. After that consumers can evaluate choices and then can determine the attitude to be taken next (Miller and Mills, 2010).

3. Utilities

The purpose of the utility is the user of the product. If what consumers feel is greater for a product, of course, the greater the willingness to pay for the product. If the benefits felt by consumers are low, consumers will be reluctant to use them, so the willingness to pay will be even lower.

RESEARCH METHODS

Using the procedure suggested by Cooper (1988), this systematic procedure helps to formulate problems, collect data, evaluate data feasibility, analyze and interpret relevant data and organize and present results. Then the results obtained are compared with the current issues. The method used is the SLR (Systematic Literature Review)

method with PRISMA (Preferred Reporting Items for Systematic Review and Meta Analysis). SLR is a literature review that is carried out systematically and rigorously. By using the SLR method several journals are synthesized to answer the following questions:

RQ1: What is the method used to collect data on consumers' willingness to pay for purchasing organic rice?

RQ2: What is the method used to measure willingness to pay for buying organic rice?

RQ3: What are the factors that influence consumers' willingness to pay for organic rice?

The Process of Search

The search process is the stage in the search to find sources by following the research questions. This search process was carried out using the Google Scholar site. The process of searching for information and information is carried out using the Google Scholar search engine which is downloaded via the Perish or Publish program and stored in Mendeley.

Eligibility Criteria

Five steps in the SLR protocol must be carried out as follows:

Stage 1, determine the criteria for the data found and whether it is suitable to be used as a research data source or not. The following are the criteria for the data carried out worthy of being a research data source:

- a) The data obtained has a period time of 2018 – 2022.
- b) The data obtained is sourced from <https://scholar.google.co.id/>, which is downloaded through the perish or publishing program.
- c) The data used is only in the form of journal papers related to the willingness to pay for organic rice.

Stage 2, information sources obtained from Google Scholar that has been downloaded using publish or perish are stored in the Mendeley application.

Stage 3, literature selection is obtained by using keywords. Keywords used in Indonesian and English. In English, the word used is the willingness to pay, while in Indonesian the keywords used are the willingness to pay, organic rice, and organic products.

Stage 4, the data collection stage is carried out by collecting research results from journals that have been published. The method is to use publish or perish, choose the Google Scholar engine, type keywords and select journals in 2018-2022 and then document them with Mendeley. At this stage, a search was carried out and 200 journals were found, followed by a selection process according to the specified criteria. At this stage the journals found will be evaluated based on the following quality assessments:

QA1: Was the journal found published in the 2018-2022 range?

QA2: Does the journal discuss willingness to pay for organic rice?

QA3: Does the journal write down the willingness to pay factor for organic rice and the factors that affect WTP?

And each journal obtained will be given a value based on the questions above:

1. Yes: for the journal that corresponds to the question
2. No: for journals that do not match the question at this stage

Stage 5, data analysis and documentation. The data obtained and collected will be analyzed. The results that have been analyzed will answer all the research questions that have been determined then the results of the research are written in paper form according to the specified format.

RESULT AND ANALYSIS

Data Search Results

The results of the data search were carried out by taking 10 journals that comply with predetermined criteria, namely journals published in the 2018-2022 period, and having a discussion on willingness to pay, and availability to pay for organic rice products. This information is then classified into several types of journals, and the results obtained can be seen in the following table:

Table 1. Journal Grouping

No	Journal Type	Years	Total
1	<i>Journal of Agricultural Socioeconomics and Business</i>	2018	1
2	<i>Indonesian Journal of Business and Entrepreneurship</i>	2018	1
3	Jurnal Ekonomi Pertanian dan Agribisnis (JEPA)	2019	1
4	Jurnal Riset Manajemen dan Bisnis (JRMB) Fakultas Ekonomi UNIAT	2019	1
5	Forum Agribisnis (<i>Agribusiness Forum</i>)	2020	1
6	Berkala Ilmiah Agribisnis AGRIDEVINA	2020	1
7	Jurnal Sosial Ekonomi Pertanian	2020	1
8	<i>Journal of Critical Reviews</i>	2020	1
9	Forum Agribisnis (<i>Agribusiness Forum</i>)	2021	1
10	Jurnal Ilmiah Mahasiswa Ekonomi Manajemen	2021	1

Quality Assessment Results

The following is the result of a special assessment in the journal which is written in the table as follows:

Table 2. Quality Assessment Results

No	Author	Years	QA1	QA2	QA3	Result
1	Rofiah, Susi Wuri Ani, Joko Sutrisno	2018	Yes	Yes	Yes	Accepted
2	Qisthy Nur Fathia, Rita Nurmalina Megawati Simanjuntak	2018	Yes	Yes	Yes	Accepted
3	Elisabet Trixie Riana, Muksin, Wilujeng Roessali	2019	Yes	Yes	Yes	Accepted
4	Ferryal Abadi, Herwin	2019	Yes	Yes	Yes	Accepted

5	Yulia Sari, Elly Rasmikayati, Bobby Rachmat, Saefudin, Tuti Karyani Sulistyodewi, Nur Wiyono	2020	Yes	Yes	Yes	Accepted
6	Arinda Dwi Nellasari, Sigit Dwi Nugroho, Eko Nurhadi	2020	Yes	Yes	Yes	Accepted
7	Elrey Ali Habib, Ebban Bagus Kuntadi	2020	Yes	Yes	Yes	Accepted
8	Andry Yamin, Nenny Wahyuni, Edy Humaidi	2020	Yes	Yes	Yes	Accepted
9	Niken Hapsari Arimurti, Kusmantoro Edy Sularso, Anny Hartati	2021	Yes	Yes	Yes	Accepted
10	Selly Celsya, Hepy Hefri Ariyanto	2021	Yes	Yes	Yes	Accepted

Data analysis

At this stage, the data is analyzed and the results answer the research questions or Research Questions (RQ) that have previously been determined and will discuss the factors that affect the availability of pay that often appear in 2018-2022.

Results of RQ1: Data Collection Techniques

Based on Research Question 1 (RQ1) regarding data collection techniques in the Willingness To Pay study, the results were obtained, namely the journal paper category based on the data collection technique. The visible results stated that all of these studies used questionnaire data collection techniques and were supported by the interview method. The number of respondents that was most used was 460 respondents and the least number of respondents was 30 respondents.

Table 3. Data Collection Technique Category

Data Collection Technique	Total Respondents	Research Paper	Total
Questionnaires and Interviews	30	[8]	1
	40	[6]	1
	45	[7]	1
	60	[1]	1
	68	[9]	1
	100	[2] [3]	2
	102	[5]	1
	270	[4]	1
	460	[10]	1

Results of RQ2: Measuring Techniques of Willingness To Pay Levels

Based on research question 2 (RQ2) regarding the technique of measuring the level of willingness to pay, the results were obtained, namely the category of journal paper based on the data analysis technique. The results show that the research used the

Contingent Valuation Method (CVM), Structural Equation Model (SEM), and regression with the help of SPSS. From the research results shown in Table 4 currently, many researchers choose to measure the willingness to pay for organic rice according to the ability of the respondents and it is known that the lowest level of willingness to pay is IDR.15,3671.00/kg and the highest is IDR.39,500.00/kg.

Table 4.
Analysis Method Category

Analysis Methods	Research Paper
Multiple Linier Regression	[7]
Logistic Regression	[3] [9]
Structural Equation Model	[4] [10]
Contingent Valuation Method	[1] [2] [3] [5] [6] [7] [8] [9] [10]

Results of RQ3: Factors Influencing Willingness To Pay

Based on research question 3 (RQ3) about the factors that influence consumers' willingness to pay for organic rice, the results are that the categories of factors that influence consumers' willingness to pay are obtained. The results seen in table 5 show that product prices are the most influential factor in the willingness to pay for organic rice based on the research in these journals. Furthermore, consumer income and lifestyle are the highest determining factors in willingness to pay.

Table 5.
Categories of factors that affect willingness to pay

No	Factors	Research Paper	Total
1	Age	[2] [3] [7]	3
2	Education	[3] [7]	2
3	Number of Family Members	[3]	1
4	Job Type	[7]	1
5	Income	[1] [2] [3] [7] [9]	5
6	Product Price	[3] [4] [5] [6] [8] [10]	6
7	Packaging	[5]	1
8	Life style	[3] [5] [8] [10]	4
9	Health	[5] [7] [10]	3
10	Brand	[3] [6] [10]	3
11	Food Safety	[5] [7]	2
12	Product Knowledge	[2] [5] [9]	3
13	Easy Service Access	[5] [8]	2
14	Product Quality	[4] [5]	2
15	Service Quality	[4]	1
16	Long Time Consume	[9]	1

Summary of Data Analysis Results

At this stage, from the results of each research question, information has been obtained about consumers' willingness to pay for organic rice, data collection techniques,

and factors that influence the level of consumers' willingness to pay for organic rice, which has been widely studied by researchers from 2018 to 2022.

Table 6.
Most Frequency Category RRQ

RQ	Aspect	Most Frequency Category
1	Data Collection Technique	Questionnaires and Interviews (460 respondents)
2	Data Analysis	The Contingent Valuation Method
3	WTP Factor	Product Price

CONCLUSION

Based on the results of research that has been carried out using the Systematic Literature Review (SLR) method, the results show that research that has been carried out in the period 2018 to 2022 is examining the level of willingness to pay or willingness to pay for organic rice and the value is obtained using the CVM method or Contingent Valuation Method. From the CVM results, it is known that the lowest level of willingness to pay is IDR.15,3671.00/kg and the highest is IDR.39,500.00/kg. The most commonly used collection technique is using a questionnaire technique supported by the interview method. Most of the data collection was done by interviewing 460 respondents. The factors that most influence the willingness to pay level of consumers are the prices of organic rice products, consumer income, and consumer lifestyles. In addition, thirteen other factors also influence the willingness to pay more for organic rice.

REFERENCES

- Abadi, F., & Herwin. (2019). *Pengaruh Harga, Kualitas Produk dan Kualitas Pelayanan Terhadap Keputusan Pembelian Beras Organik Di Jakarta*. Jurnal Riset Manajemen Dan Bisnis (JRMB) Fakultas Ekonomi UNIAT. 4(1), 1-8. [journal 4]
- Amelia, R. (2016). *Analisis Willingness to Pay (WTP) dan Kebutuhan Air di Kecamatan Merawang*. Jurnal Infoteknik. 17(2), 235-252.
- Amin, Z., Andry, Humaidi, E., Wahyuni, N., Ningsih, V.Y. (2020). *Consumer's Perceptions and Willingness To Pay (WTP) Organic Rice*. *Journal of Critical Reviews*. 7(1), 48-51. [journal 8]
- Arimurti, N.H., Sularso, K.E., Hartati, A. (2021). *Kesediaan Membayar (Willingness To Pay) Beras Organik Di Kabupaten Banyumas dan Faktor yang Mempengaruhinya*. Forum Agribisnis (Agribusiness Forum). 1(1), 75-89. [journal 9]
- Badan Pusat Statistik. (2020). *Jumlah Dan Distribusi Penduduk 2020*. Retrieved from <https://sensus.bps.go.id/main/index/sp2020>
- Celsya, S and Ariyanto, H.H. (2021). *Analisis Faktor Yang Mempengaruhi Minat Pembelian Produk Organik Di Kota Batam*. Jurnal Ilmiah Mahasiswa Ekonomi Manajemen. 6(4), 857 – 872. [journal 10]

- Cooper, H. M. (1988). Organizing knowledge syntheses: A taxonomy of literature reviews. *Knowledge in Society* 1, 104. <https://doi.org/10.1007/BF03177550>
- Fathia, Q.N., and Simanjuntak, N.M. (2018). Consumer's Attitude and Willingness to Pay for Organic Rice. *Indonesian Journal of Business and Entrepreneurship*. 4(1), 11-21. [journal 2]
- Habib, E.A and Kuntadi, E.B. (2020). *Analisis Willingness To Pay Beras Organik Aromatik "Botanik" Gapoktan Al-Barokah Di Kabupaten Bondowoso*. *Jurnal Sosial Ekonomi Pertanian*. 13(1),38-52. [journal 7]
- Lusk, J. L. & Hudson, D. (2004). Willingness to Pay Estimates and Their Relevance to Agribusiness Decision Making. *Review of Agricultural Economic*. 26(2), 152-169. Retrieved from <https://doi.org/10.1111/j.1467-9353.2004.00168.x>.
- Mankiw, N., Gregory. (2012). *Principle of Micro Economic*, Vol. 1, Asia Edition. Jakarta : Salemba Empat.
- Miller, K. W., & Mills, M. K. (2010). Doing More With Less: Toward A Parsimonious Approach to Examining Brand Luxury. Retrieved from <http://anzmac2010.org/proceedings/pdf/anzmac10Final00152.pdf>
- Munene, C. N. (2006). Analysis of Consumer Attitudes and Their Willingness to Pay for Functional Foods. *Thesis*. The Department of Agricultural Economics and Agribusiness. Louisiana State University.
- Nababan, T. S. dan Simanjuntak, J. (2008). *Aplikasi Willingness to Pay Sebagai Proksi Terhadap Variabel Harga : Suatu Model Empirik Dalam Estimasi Permintaan Energi Listrik Rumah Tangga*. *Jurnal Organisasi dan Manajemen*. 4(4), 73-84. Retrieved from <https://lppm.ut.ac.id/02-sihol.pdf>.
- Nellasari, A.D., Nugroho, S.D., Nurhadi, E. (2020). *Kesediaan Membayar Lebih Terhadap Beras Organik Di Transmart Iconmall Gresik*. *Berkala Ilmiah Agribisnis AGRIDEVINA*. 9 (2), 115-121. [journal 6]
- Purwaningsih, Betty. (2009). *Faktor-faktor yang Mempengaruhi Pola Perilaku Konsumen Beras Organik di Surakarta*. Skripsi Jurusan Sosiologi Fakultas Ilmu Sosial dan Ilmu Politik Universitas Sebelas Maret Surakarta.
- Riana, E.T., Mukson, Roessali, W. (2019). *Analisis Kesediaan Membayar (Willingness To Pay) Konsumen Terhadap Berbagai Jenis Beras Organik Di Kota Semarang (Kasus di Pasar Modern Gelael Signature)*. *Jurnal Ekonomi Pertanian dan Agribisnis JEPA*. 3(4), 689-700. [journal 3]
- Rofiah., Ani, S.W., Sutrisno, J. (2020). *Kesediaan Membayar (Willingness To Pay) Beras Organik Di Kabupaten Karanganyar*. *Journal of Agricultural Socioeconomics And Business*. 1(1), 46-56. [journal 1]
- Sari, Y., Rasmikayati, E., Rachmat, B., Saefudin. Sulistyodewi, T.K., Wiyono, N. (2020). *Willingness To Pay Konsumen Beras Organik Dan Faktor-Faktor Yang Berkaitan dengan Kesediaan Konsumen untuk Membayar Lebih*. *Forum Agribisnis (Agribusiness Forum)*. 55(10), 46-57. [journal 5]
- Simoson, I., & Drolet, A. (2004). Anchoring Affects on Consumer's Willingness to Pay and Willingness to Accept. *The Journal of Consumer Research*. 31(3), 681-690.
- Waryat and Handayani, Y. (2017). *Karakteristik Mutu Beras Organik dan Non Organik*. *Buletin Pertanian Perkotaan*. 7(2), 43- 56.