

Several factors affect the consumption of animal foods in the coastal areas in Pangkep Regency, South Sulawesi

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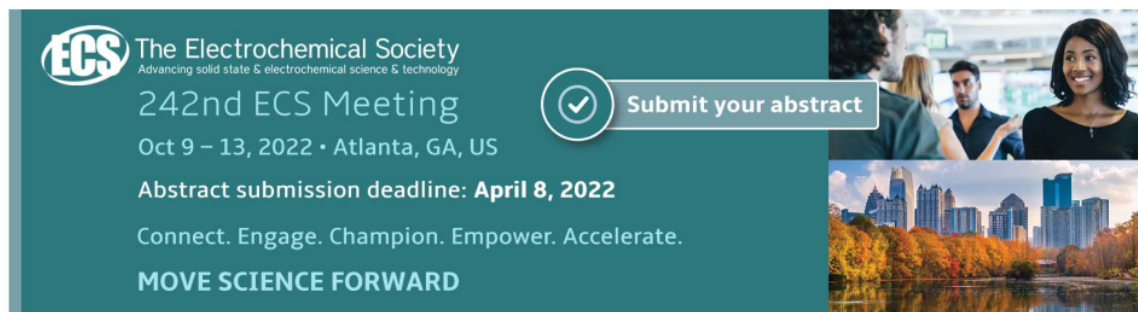
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Several factors affect the consumption of animal foods in the coastal areas in Pangkep Regency, South Sulawesi

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Abstract. This research aimed to know several factors affect the consumption of animal foods in the coastal areas in Pangkep Regency, South Sulawesi. The research was conducted in 2019. Data were collected from the community surrounding the coastal areas totalled 81 persons. Data were collected through food recall for a month. Data were analyzed using a linear regression model. Animal foods consumption was the dependent variable, while independent variables consisted of age, level of education, number of family and income. The results of this research revealed that adjusted R² was 0.392, meaning that 39.2% of the independent variables contributed to the model, while 60.8% were contributed by other factors which were not included in the model. Simultaneously, all independent variables affected significantly to the consumption of animal foods ($p < 0.05$). Partially, only income affected significantly to the consumption of animal foods ($p < 0.05$).

1. Introduction

Animal protein is one of the nutrients that are needed by humans. Animal sustainability protein is crucial for human growth, health and intelligence. Livestock as a food source (meat, eggs, and milk) for humans make a major contribution to the fulfilment of animal protein needs [1]. Based on data from [2] the national food consumption of the Indonesian population averages 61.23 grams of protein per capita every day and is following the standard of adequate daily protein consumption. Data on average protein consumption by [3] mentions fish 10.12 g/capita/day, meat 22.38 g/capita/day, chicken meat 23.01 g/capita/day, eggs 12.8 g/capita/day and milk 8.03 g/capita/day.

Animal protein plays an important role as part of a healthy diet and as a contributor to food safety. Consumption of seafood in many parts of the world is generally growing, particularly for coastal communities [4]. Delgado [5] and Popkin et al. [6] argued that in addition to increased demand resulting from population growth, socio-economic changes such as rising incomes, increased urbanization and ageing populations are driving increased demand for protein globally, increasingly understanding the protein's contribution to healthy ageing.

According to [7], meat is an important component of the human diet, and beef, in particular, has been instrumental in providing energy, protein and essential micronutrients to food security. Ruminants play a key role in transforming fibrous content, which cannot be digested by humans, into a protein with a high nutritional value. Bax et al. [8] found that raw meat is covered by 20–25% protein depends on the origin and fat content, which may lead to 28–36% in cooked meat due to water loss due to cooking.



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Meat protein is an excellent source of essential amino acids and has high net use and digestibility of protein.

Other sources of animal foods are poultry meat which can be produced from indigenous chickens, laying hens, broilers, ducks, quails, pigeons and Muscovy ducks. Besides meat, [9] stated that milk is one of the types of food from the livestock sub-sector which also contributes to the development of the national economy. Milk has good prospects for development because milk is needed by all people. Animal foods which produced from poultry is eggs. According to [10,11], eggs, a cheap yet highly nutritious food, provide equilibrated nutrients that affect human health.

Pangkep Regency is a coastal area, the livelihoods of the population are fishermen, so the majority of the population's food consumption comes from the sea such as fish, shrimp and squid. In fact, according to [12], there were 53,377 beef cattle, 3,432 buffaloes, 9,944 horses, 39,081 goats, 724,693 indigenous chickens, 72,773 chickens, 46,771 laying hen chickens, and 485,989 ducks. According to data, Pangkep Regency contributed about 1.65% of poultry meat in South Sulawesi Province.

Regarding economics theory, many variables affect to the level of consumption of foods, such as the price of the products, price other related products, income per capita, taste or habit, people population, for a fast price, income distribution and effort to increase selling products [13].

The objective of this research was to know several factors affect the consumption of animal foods in the coastal areas in Pangkep regency, South Sulawesi province.

1 Research method

This research was carried out in Pangkep regency, South Sulawesi province in 2019. The sample has consisted of people who lived along the coast of totalled 81 persons. Data were collected from observation, interview using a questionnaire. Food recall was used to know the number of animal foods was consumed daily for a month. To know factors affecting the consumption of animal foods in the coastal areas in Pangkep Regency, South Sulawesi province, a linear regression model was used.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

where:

Y	: quantity of consumption of animal foods (kg/month)
a	: constant
b ₁ , b ₂ , b ₃ , b ₄	: coefficient of regression for X ₁ , X ₂ , X ₃ and X ₄
X ₁	: household income (IDR/month)
X ₂	: number of family (person)
X ₃	: age (years)
X ₄	: education level (years)
e	: error

Y_i was the dependent variable on it. It was defined as amount of animal foods demanded by consumers. X₁ was independent variable which was expressed as household income and it was assumed to have a positive sign. X₂ was expressed as number of family and it was assumed to have a positive sign. X₃ was expressed as age of respondents and it was assumed to have a positive sign. X₄ was expressed as education level and it was assumed to have a positive sign.

3. Results and discussion

Table 1. Characteristics of respondents.

Characteristics	Min	Max	Mean	SD
Age (years)	27	52	38.36	5.70
Education level (years)	1	12	6.20	3.32
Number of family (person)	3	5	5.27	1.47
Household income (IDR million)	1,000	7,200	2,206	1,08
Animal food consumption (g)	30.95	48.10	39.06	3.45

Based on table 1, the mean of respondents' age was 38.36 years, meaning that they were in productive age. Looking at the length of education, the mean was 6.20 years. Meaning that on average respondents graduated from Elementary School. As the regulation of Indonesia Government, the length of schooling for Elementary School level was 6 years, followed by Junior High School was 3 years, Senior High School was 3 years and the University was 4 years. The mean of family number was 5.27 persons. This means that respondents came from big families. Even though respondent's maximum household income was IDR 7,200,000 the mean was still low: IDR 2,206,000. Meaning that respondent's came from low-level income family [14].

Table 2. Several factors affect the consumption of animal foods.

Variables	Coefficient regression	t value	Sig
Constant	37,598	13.991	0.000*
Age (year)	-0.098	-1.102	0.274
Education level	0.026	0.271	0.787
Number of family (person)	-0.065	-0.735	0.456
Household income (IDR million)	0.618	6.367	0.000*
Adjusted R ² = 0.392; F test = 13.896; Sig F test = 0.000			

Table 2 showed that adjusted R2 was 0.392, meaning that 39.2% of independent variables namely age, education level, number of families and household income influenced the consumption of animal foods. While 60.8% was influenced by other factors that were not included in the model.

According to the F test, simultaneously all variables: age, education level, number of families and household income in the model affected significantly ($p < 0.05$) to animal foods consumption. Partially, only household income affected significantly ($p < 0.05$) to animal foods consumption.

The coefficient regression of age was -0.098 and negative. This means that age in contra with animal foods consumption. As age increase by 1 year, the consumption of animal foods decreased by 9.8%. The coefficient regression for the length of education was 0.026 and positive. Meaning that as the length of education level increased by 1 year, the consumption of animal foods increased by 2.6%. The number of the family has coefficient regression -0.065 and negative. This means that as the number of the family increased by 1 person, animal foods consumption decreased by 6.5%. The coefficient regression for household income was 0.618 and positive. This means that as household income increased by IDR 1,000,000/month, animal food consumption increased by 61.8%.

This research was supported by [15] who argued that household demand for animal food in Padang City was aggregately influenced by the price of comfort, both price elasticity and cross-price elasticity, household income, household membership and household age, and explicitly based on the level of income of each comfort was influenced by different social demography. Reference [16] stated that household socioeconomic factors such as the number of household members, location, work participation and schooling of the head of the household and several other economic factors such as

income, the level of household expenditure for food, and the price of some food sources of protein products animal influences household decisions in consuming food sources of animal protein.

4. Conclusion

Based on the results of the research, it can be concluded that simultaneously, all independent variables: age, education level, number of family and household income influenced significantly to animal foods consumption, and only household income influenced partially to animal foods consumption.

References

- [1] Direktorat Jendral Peternakan 2008 *Statistik Peternakan Jakarta* (Jakarta: Direktorat Jenderal Peternakan Departemen Pertanian RI)
- [2] Departemen Kesehatan Republik Indonesia 2008 Laporan Hasil Riskesdas Indonesia Tahun 2007 (Jakarta: Badan Penelitian dan Pengembangan)
- [3] Badan Pusat Statistik 2017 Analisis Konsumsi Rumah Tangga (Jakarta: BPS)
- [4] Henschion M, Hayes M, Mullen A M and Tiwari B 2017 Future protein supply and demand: strategies and factors influencing a sustainable equilibrium *Foods* **6**(53) 1–21
- [5] Delgado C L 2003 Rising consumption of meat and milk in developing countries has created a new food revolution *J. Nutr.* **133** 3907S–10S
- [6] Popkin B M, Adair L S and Ng S W 2012 Global nutrition and the pandemic of obesity in developing countries *Nutr. Rev.* **70** 3–21
- [7] Gerber P J, Mottet A, Opio C I, Falcucci A and Teillard F 2015 Environmental impacts of beef production: review of challenges and perspectives for durability *Meat Sci* **109** 2–12
- [8] Bax M L, Buffière C, Hafnaoui N, Gaudichon C, Savary-Auzeloux I, Dardevet D, Santé-Lhoutellier V and Rémond D 2013 Effects of meat cooking, and of ingested amount, on protein digestion speed and entry of residual proteins into the colon: a study in minipigs *PLoS ONE* **8** e61252
- [9] Yunita B, Nugraha A T dan Muhib A 2018 Analisis faktor-faktor yang mempengaruhi permintaan susu sapi pasteurisasi di koperasi produksi susu (KPS) Bogor *Jurnal Agribisnis* **12** 52–60
- [10] Eckel R H, Jakicic J M and Ard J D 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American college of cardiology/American heart association task force on practice guidelines *Journal of the American College of Cardiology* **63** 2960–84
- [11] USDA National Nutrient Database for Standard Reference. Beltsville, MD, USA: US Department of Agriculture, Agricultural Research Service, Nutrient Data Laboratory 2015
- [12] Dinas Tanaman Pangan dan Peternakan Kabupaten Pangkajene dan Kepulauan 2017 *Laporan Tahunan* (Pangkep)
- [13] Rahardja P dan Manurung M 2010 *Teori Ekonomi Mikro* 4th (Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia)
- [14] Rahman A 2019 *Pola Konsumsi Pangan Hewani Masyarakat Pesisir di Kabupaten Pangkep Skripsi* (Makassar: Fakultas Peternakan Universitas Hasanuddin)
- [15] Novarista N, Syahni R and Jafrinur 2013 Faktor-faktor yang mempengaruhi konsumsi pangan hewani pada konsumen rumah tangga di kota Padang *Jurnal Agribisnis Kerakyatan* **3** 64–74
- [16] Muzayyanah M A U, Nurtini S, Widiati W, Syahlani S P and Kusumastuti T A 2017 Analisis keputusan rumah tangga dalam mengkonsumsi pangan sumber protein hewani asal ternak dan non ternak: studi kasus di propinsi Daerah Istimewa Yogyakarta *Buletin Peternakan* **41** 203–11

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