Pengaruh kondisi pemanggangan terhadap Kualitas *Sponge Cake* di departemen Pastry Wyndham Opi Hotel

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Abstrak

Sponge cake adalah salah satu jenis produk roti manis yang dicirikan oleh remahnya yang lembut dan aerasi serta dengan kerak berwarna tipis. Kualitas dari *sponge cake* dapat diukur dengan berbagai atribut, termasuk dari pengaruh proses pemanggangan yang meliputi suhu, bahan baku serta teknik pengolahan. Perluasan produk kue berasal dari volume gelembung udara yang terperangkap dalam adonan kue dan bagian cair dalam sistem. Sampel yang menjadi objek penelitian yaitu staff pastry departemen Wyndham Opi Hotel Palembang yang berjumlah 11 orang. Hasil uji validitas variabel X dan Y, menunjukkan bahwa r $_{hitung}$ > r $_{tabel}$ pada nilai signifikansi 0,05%. sehingga dapat dikatakan bahwa semua item dalam angket penelitian ini valid, sehingga dapat digunakan sebagai instrument penelitian. Uji Relibilitas dijelaskan bahwa Variabel dikatakan reliabel jika nilai Alpha yang dihasilkan lebih besar dari r $_{tabel}$ (nilai alpha > 0,600) sehingga diperoleh hasil dari uji variabel X yaitu X1 sebesar 0,795 > 0,600 lalu X2 sebesar 0,793 > 0,600 dan X3 sebesar 0,784 > 0,600 maka butir indikator di tiap kuesioner **reliabel**. Sama halnya dengan variabel Y yaitu sebesar 0,822 > 0,600 maka butir indikator di tiap kuesioner tersebut **reliabel** karena memenuhi kriteria yang telah ditetapkan. Berdasarkan tabel Model Summary didapatkan bahwa nilai R adalah 0,927 menunjukkan adanya hubungan yang kuat antara variabel X (proses pemanggangan) terhadap variabel Y (kualitas sponge cake). Nilai R Square = 0,859 menunjukkan bahwa variabel X (proses pemanggangan) dapat mempengaruhi variabel Y (kualitas sponge cake sebesar 85,9%. Sedangkan 14,1% dipengaruhi oleh faktor lain. Berdasarkan tabel koefisien, didapatkan persamaan sebagai berikut: **Y =10,980+0,753 X1+ 1,357X2 +1,321X3**. Berdasarkan penelitian yang telah dilakukan oleh, adapun saran yang dapat penulis sampaikan yaitu diharapkan selalu adanya pengawasan atau pelatihan yang fokus untuk staff pastry mengenai proses pemanggangan sponge cake yang baik, teratur dan sesuai dengan SOP agar kualitas sponge cake yang dimiliki oleh pastry departemen Wyndham Opi Hotel selalu terjaga dengan baik dan tidak mengalami kegagalan produksi serta kerugian lainnya.

Keywords: Sponge cake, kondisi pemanggangan, kualitas,bahan baku

1. Pendahuluan

Hotel adalah salah satu jenis akomodasi yang menjadikan sebagian atau seluruh bangunan untuk menyediakan jasa pelayanan penginapan makan dan minum serta jasa lainnya yang dikelola secara komersial (Novitasari *et al*,2016) Hotel terdiri dari berbagai macam departemen yang bertugas dan bertanggung jawab terhadap bidang pekerjaan tertentu. Salah satu departemen yang memberikan keuntungan besar adalah *Food and Beverage Department*.

Food and Beverage production adalah bagian yang bertugas mengolah, memproduksi dan menyajikan makanan dan minuman untuk kebutuhan tamu hotel, baik di kamar, restoran, kedai kopi, jamuan makan, jamuan karyawan (Lestari,2013).

Menurut Septiani (2017) *food and beverage* terdiri dari beberapa bagian di dalamnya yaitu *kitchen, pastry, cold kitchen dan steward*. Bagian ini dibagi dengan tujuan memfasilitasi operasi kerja di hotel, khususnya untuk berbagai jenis pengolahan makanan. Bagian pastry di sebuah hotel juga mempengaruhi perkembangan dunia kuliner sehingga banyak terbentuk kreativitas dari permintaan tamu.

Menurut Kepala BPD PHRI SUMSEL (2023) terdapat 4 (empat) hotel bintang 5 (lima) dengan fasilitas dan pelayanan terbaik yang dimiliki oleh Kota Palembang ialah The

Alts, The Arista, Excelton dan Wyndham Opi Hotel Palembang. Wyndham Opi Hotel Palembang merupakan satu diantara hotel bintang 5 yang berada dalam kawasan komplek Opi Mall Jakabaring.

Wyndham Opi Hotel memiliki divisi *pastry* yang berperan sangat penting dalam kelancaran operasional hotel yang bertanggung jawab atas segala pengolahan berbagai jenis kue atau roti untuk disajikan dalam hidangan *buffet*, makan siang atau makan malam serta fasilitas kamar pelengkap untuk tamu. Pemenuhan item dalam hal ini tidak lepas dari basic cake yaitu *sponge cake. Sponge cake* adalah salah satu jenis produk roti manis yang dicirikan oleh remahnya yang lembut dan aerasi serta dengan kerak berwarna tipis.

Sani et al (2014) menyatakan bahwa memanggang merupakan tahap penting untuk produksi *sponge cake* yang prosesnya rumit dan memerlukan kondisi optimum bervariasi dengan jenis makanan yang disiapkan dan bahkan dengan formula khusus dalam jenis makanan. disebutkan bahwa sifat produk akhir tidak hanya dipengaruhi oleh formulasi (pilihan dan jumlah bahan) tetapi juga oleh kondisi pengolahan.

Menurut Chaiya et al (2011) Kualitas dari *sponge cake* dapat diukur dengan berbagai atribut, termasuk dari pengaruh proses pemanggangan yang meliputi suhu, bahan baku serta teknik pengolahan. Perluasan produk kue berasal dari volume gelembung udara yang terperangkap dalam adonan kue dan bagian cair dalam sistem.

2. Metode Penelitian

2.1. Metode Pengumpulan data

Peneliti menggunakan metode observasi, wawancara dan studi pustaka untuk mengumpulkan data. Populasi dalam penelitian ini adalah karyawan bagian Food and Bevarage Department, Wyndham Opi Hotel Palembang berjumlah 31 (tiga puluh satu) orang. Sampel adalah yang mewakili dari populasi yang menjadi objek penelitian yaitu staff pastry departemen Wyndham Opi Hotel Palembang yang berjumlah 11 orang. Sample dihitung dengan menggunakan rumus slovin.

2.2. Metode Penelitian

Penelitian ini menggunakan metode kuantitatif korelasi dengan menyebarkan kuesioner kepada responden bagian Pastry departemen yang berada di bawah Food and Bevarage Department, Wyndham Opi Hotel Palembang yang diolah dengan uji validitas, uji reliabilitas dan Analisis Regresi Liniear Berganda untuk mendapatkan hasil yang mutlak dan signifikan.

3. Hasil dan Pembahasan

3.1. Uji Validitas

Hasil uji validitas variabel X dan Y , menunjukkan bahwa $r_{hitung} > r_{tabel}$ pada nilai signifikansi 0,05%. Oleh karena itu dapat disimpulkan bahwa semua item dalam angket penelitian ini valid, sehingga dapat digunakan sebagai instrument penelitian.

3.2. Uji Reliabillitas

Variabel	Nilai koefisien Alpha	r_{tabel}	Keputusan
X1	0,795	0,600	Reliabel
X2	0,793	0,600	Reliabel
X3	0,784	0,600	Reliabel
Y	0,822	0,600	Reliabel

Uji Relibilitas dijelaskan bahwa Variabel dikatakan reliabel jika nilai Alpha yang dihasilkan lebih besar dari r_{tabel} (nilai alpha > 0,600) sehingga diperoleh hasil dari uji variabel X yaitu X1 sebesar 0,795 > 0,600 lalu X2 sebesar 0,793 > 0,600 dan X3 sebesar 0,784 > 0,600 maka butir indikator di tiap kuesioner *reliabel*. Sama halnya dengan variabel Y yaitu sebesar 0,822 > 0,600 maka butir indikator di tiap kuesioner tersebut *reliabel* karena memenuhi kriteria yang telah ditetapkan.

3.3. Uji Analisis Regresi Linear Berganda

Uji Regresi Linear Berganda adalah Suatu analisis asosiasi yang digunakan secara bersamaan untuk meneliti pengaruh dua atau lebih variabel tergantung dengan skala interval (Umi Narimawati, 2008; dalam Dariska,2022). Penulis menggunakan uji regresi linear berganda dikarenakan dalam penelitian ini menggunakan lebih dari satu variabel. Hal ini dilakukan karena penulis ingin mengetahui apa pengaruh dari variabel bebas (X1,X2,X3) terhadap variabel terikat Y. Lalu hasilnya akan dapat diketahui pengaruh proses pemanggangan terhadap kualitas sponge cake di pastry departemen Wyndham Opi Hotel Palembang. Model persamaan penelitian ini adalah:

$$Y = a + b1\ X1 + b2\ X2 + b3\ X3 + bnXn$$

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,927[a]	,859	,799	1,577

a. Predictors: (Constant), TEKNIK PENGOALAHAN, SUHU, BAHAN BAKU

Berdasarkan tabel Model Summary didapatkan bahwa nilai R adalah 0,927 menunjukkan adanya hubungan yang kuat antara variabel X (proses pemanggangan) terhadap variabel Y (kualitas sponge cake). Nilai R Square = 0,859 menunjukkan bahwa variabel X (proses pemanggangan) dapat mempengaruhi variabel Y (kualitas sponge cake sebesar 85,9%. Sedangkan 14,1% dipengaruhi oleh faktor lain.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	106,235	3	35,412	14,245	,002[b]
	Residual	17,401	7	2,486		
	Total	123,636	10			

a. Dependent Variable: KUALITAS SPONGE CAKE

b. Predictors: (Constant), TEKNIK PENGOALAHAN, SUHU, BAHAN BAKU

Berdasarkan tabel ANOVA dapat disimpulkan mengenai Uji F. Pengujian hipotesis ini digunakan untuk menguji pengaruh secara simultan variabel independen terhadap variabel dependen. Ketentuan dalam Uji F ini ialah dimana nilai sig < 0,005 dan nilai F hitung > Ftabel. Maka dikatakan bahwa adanya pengaruh antar variabel independen dan dependen. Dalam penelitian kalini F_{tabel} =4,066. Berdasarkan hasil uji analisa regresi liniear berganda didapatkan hasil F_{hitung}= 14,245 dan nilai sig =0,002. Sehingga dapat disimpulkan bahwa nilai sig 0,002 < 0,005 dan F_{hitung} > $F_{tabel,}$ variabel independen (X) mempengaruhi variabel dependen (Y).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	10,980	5,315		2,066	,078
	SUHU	,753	,236	,519	3,191	,015
	BAHAN BAKU	1,357	,561	,882	2,418	,046

TEKNIK PENGOALAHAN	1,321	,366	1,316	3,614	,009

a. Dependent Variable: KUALITAS SPONGE CAKE

Berdasarkan tabel koefisien, didapatkan persamaan sebagai berikut:
Y =10,980+0,753 X1+ 1,357X2 +1,321X3, dimana:

- Koefesien regresif 1 adalah 0,753, hal ini menunjukkan bahwa dengan meningkatan Variabel X1 maka akan meningkatkan variabel Y sebesar 0,753. Koefesien bernilai positif artinya terjadi hubungan positif antara Suhu (X1) dengan kualitas spongecake.
- Koefesien regresif 2 adalah 1,357,hal ini menunjukkan bahwa dengan meningkatan Variabel X2 maka akan meningkatkan variabel Y sebesar 1,375. Koefesien bernilai positif artinya terjadi hubungan positif antara Bahan baku (X2) dengan kualitas spongecake.

- Koefisien regresif 3 adalah 1,321,hal ini menunjukkan bahwa dengan meningkatan Variabel X3 maka akan meningkatkan variabel Y sebesar 1,321. Koefesien bernilai positif artinya terjadi hubungan positif antara Teknik pengolahan (X3) dengan kualitas spongecake.

4. Kesimpulan

Ñ Hubungan suhu atau temperatur terhadap kualitas sponge cake dihasilkan dari pengujian analisis regresi linear berganda dengan uji t-test dengan memperoleh persamaan t_{hitung} 3,191 > t $_{tabel}$ 2,364 dan taraf signifikansi sebesar 0,015 lebih kecil dari konstanta = 0,05 maka Ha diterima dan Ho ditolak, sehingga dapat dianalisis bahwa benar ada pengaruh suhu atau temperatur dalam proses pemanggangan (X1) terhadap kualitas sponge cake (Y).

Ñ Hubungan bahan baku terhadap kualitas sponge cake dibuktikan dengan nilai t_{hitung} X2 dalam hasil analisa regresi berganda bernilai positif dengan hasil uji t atau hipotesis t_{hitung} 2,418 > t_{tabel} 2,364 dengan taraf signifikansi sebesar 0,045 dimana lebih kecil dari pada konstanta = 0,05 maka Ha diterima dan Ho ditolak, sehingga dapat dianalisis terdapat pengaruh bahan baku (X2) terhadap kualitas sponge cake (Y).

Ñ Hubungan Teknik Pengolahan terhadap kualitas sponge cake dapat dijelaaskan dengan dasar dari hasil analisis regresi Untuk t_{hitung} X3 bernilai positif dan hasil uji t atau hipotesis t_{hitung} 3,614 > t_{tabel} 2,364 dengan nilai signifikansi sebesar 0,009 dimana lebih kecil daripada ketetapan sebesar 0,05 maka Ho ditolak dan Ha diterima, sehingga dapat dianalisis ada pengaruh dalam hal Teknik Pengolahan (X3) terhadap kualitas sponge cake (Y).

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Effect of baking conditions on Quality Sponge Cake in Pastry Department of Wyndham Opi Hotel

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Abstract

Sponge cakesis a type of sweet bakery product characterized by its soft, aerated crumb and thin colored crust. The quality of sponge cake can be measured by various attributes, including the influence of the roasting process which includes temperature, raw materials and processing techniques. The expansion of cake products comes from the volume of air bubbles trapped in the cake mix and the liquid part of the system. Sample who became the object of research were the pastry staff of the Wyndham Opi Hotel Palembang department, totaling 11 people. The results of the validity test of the X and Y variables show that r count > r table at a significance value of 0.05%. so that it can be said that all items in this research questionnaire are valid, so that they can be used as research instruments. The Reliability Test explained that the variable is said to be reliable if the resulting Alpha value is greater than r table (alpha value > 0.600) so that the results obtained from the X variable test are X1 of 0.795 > 0.600 then X2 of 0.793 > 0.600 and X3 of 0.784 > 0.600 then the item indicators in each questionnaire are reliable. Likewise with the Y variable, which is equal to 0.822 > 0.600, the indicator items in each questionnaire are reliable because they meet predetermined criteria. Based on the Model Summary table, it was found that the R value was 0.927 indicating a strong relationship between variable X (baking process) and variable Y (sponge cake quality). The value of R Square = 0.859 indicates that variable X (baking process) can affect variable Y (sponge cake quality of 85.9%. Meanwhile, 14.1% is influenced by other factors. Based on the coefficient table, the following equation is obtained: Y = 10.980+ 0.753 X1+ 1.357X2 +1.321X3. Based on the research that has been carried out by the author, the suggestion that the author can convey is that it is hoped that there will always be focused supervision or training for pastry staff regarding a good sponge cake baking process,

Keywords: Sponge cake, baking conditions, quality, raw materials

5. Introduction

Hotel is a type of accommodation that makes part or all of the building to provide lodging services, eating and drinking and other services that are managed commercially (Novitasari et al, 2016). One of the departments that gives a big advantage is Food and Beverage Department.

Food and Beverage productionis the part in charge of processing, producing and serving food and drinks for the needs of hotel guests, both in rooms, restaurants, coffee shops, banquets, employee banquets (Lestari, 2013).

According to Septiani (2017) food and beverage consists of several parts, namely kitchen, pastry, cold kitchen and steward. This section is divided with the aim of facilitating work operations in hotels, in particular for various types of food processing. The pastry department in a hotel also influences the development of the culinary world so that a lot of creativity is formed from guest requests.

According to the Head of BPD PHRI SUMSEL (2023) there are 4 (four) 5 (five) star hotels with the best facilities and services owned by the City of Palembang, namely The Alts, The Arista, Excelton and Wyndham Opi Hotel Palembang. Wyndham Opi Hotel Palembang is one of the 5 star hotels located in the Jakabaring Opi Mall complex area.

Wyndham Opi Hotel has a pastry division which plays a very important role in the smooth operation of the hotel which is responsible for all the processing of various types of cakes or bread to be served in buffet dishes, lunch or dinner as well as complementary

room facilities for guests. Fulfillment of items in this case cannot be separated from the basic cake, namely sponge cake. Sponge cake is a type of sweet bakery product which is characterized by its soft, aerated crumb and thin colored crust.

Sani et al (2014) stated that baking is an important step for the production of sponge cake which is a complicated process and requires optimum conditions that vary with the type of food being prepared and even with the specific formula in the type of food. it was stated that the properties of the final product were not only influenced by the formulation (choice and amount of ingredients) but also by the processing conditions.

According to Chaiya et al (2011) The quality of sponge cake can be measured by various attributes, including the influence of the roasting process which includes temperature, raw materials and processing techniques. The expansion of cake products comes from the volume of air bubbles trapped in the cake mix and the liquid part of the system.

6. Research methods

6.1. Method of collecting data

Researchers used the method of observation, interviews and literature to collect data. The population in this study were employees of the Food and Bevarage Department, Wyndham Opi Hotel Palembang totaling 31 (thirty one) people. The sample is representative of the population that is the object of research, namely the pastry staff of the Wyndham Opi Hotel Palembang department, totaling 11 people. The sample is calculated using the slovin formula.

6.2. Research methods

This study used a quantitative correlation method by distributing questionnaires to respondents in the Pastry department under the Food and Bevarage Department, Wyndham Opi Hotel Palembang which were processed with validity tests, reliability tests and Multiple Linear Regression Analysis to obtain absolute and significant results.

7. Results and Discussion

7.1. Validity test

The results of the validity test of the X and Y variables show that r count > r table at a significance value of 0.05%. Therefore it can be concluded that all items in this research questionnaire are valid, so they can be used as research instruments.

7.2. Reliability Test

Variable	Alpha coefficient value	r_{table}	Decision
X1	0.795	0.600	Reliable
X2	0.793	0.600	Reliable
X3	0.784	0.600	Reliable
Y	0.822	0.600	Reliable

The Reliability Test explained that the variable is said to be reliable if the resulting Alpha value is greater than r table (alpha value > 0.600) so that the results obtained from the X variable test are X1 of 0.795 > 0.600 then X2 of 0.793 > 0.600 and X3 of 0.784 > 0.600 then the item indicators in each questionnaire are reliable. Likewise with the Y variable, which is equal to 0.822 > 0.600, the indicator items in each questionnaire are reliable because they meet predetermined criteria.

7.3. Multiple Linear Regression Analysis Test

Multiple Linear Regression Test is an association analysis that is used simultaneously to examine the effect of two or more variables depending on the interval scale (Umi Narimawati, 2008; in Dariska, 2022). The author uses multiple linear regression tests because in this study it uses more than one variable. This is done because the writer wants to know what the effect of the independent variables (X1,X2,X3) is on the dependent variable Y. Then the results will show the effect of the baking process on the quality of the sponge cake in the pastry department of the Wyndham Opi Hotel Palembang. The research equation model is:

$$Y = a + b1\ X1 + b2\ X2 + b3\ X3 + bnXn$$

Summary models

Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	,927a	,859	,799	1,577

a. Predictors: (Constant), PROCESSING TECHNIQUE, TEMPERATURE, RAW MATERIALS

Based on the Model Summary table, it was found that the R value was 0.927 indicating a strong relationship between variable X (baking process) and variable Y (sponge cake quality). The value of R Square = 0.859 indicates that variable X (baking process) can affect variable Y (sponge cake quality of 85.9%. Meanwhile, 14.1% is influenced by other factors.

ANOVAa

Model		Sum of Squares	df	MeanSquare	F	Sig.
1	Regression	106,235	3	35,412	14,245	,002b
	residual	17,401	7	2,486		
	Total	123,636	10			

a. Dependent Variable: SPONGE CAKE QUALITY

b. Predictors: (Constant), PROCESSING TECHNIQUE, TEMPERATURE, RAW MATERIALS

Based on the ANOVA table it can be concluded regarding the F Test. This hypothesis testing is used to test the simultaneous effect of the independent variables on the dependent variable. The provisions in this F test are where the sig value <0.005 and the calculated F value > Ftable. So it is said that there is influence between the independent and dependent variables. In this study Ftable = 4.066. Based on the results of the multiple linear regression analysis test, the results obtained were Fcount = 14.245 and sig = 0.002. So it can be concluded that the sig value of 0.002 <0.005 and Fcount > F table, the independent variable (X) affects the dependent variable (Y).

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	std. Error	Betas	t	Sig.
1	(Constant)	10,980	5,315		2,066	,078
	TEMPERATURE	,753	,236	,519	3,191	,015
	RAW MATERIAL	1.357	,561	,882	2,418	.046
	PROCESSING TECHNIQUE	1,321	,366	1.316	3,614	,009

a. Dependent Variable: SPONGE CAKE QUALITY

Based on the coefficient table, the following equation is obtained:
$Y = 10,980 + 0,753 X1 + 1,357X2 + 1,321X3$, where:

- *The regressive coefficient 1 is 0.753, this indicates that increasing the X1 variable will increase the Y variable by 0.753. The coefficient is positive, meaning that there is a positive relationship between temperature (X1) and spongecake quality.*
- *The regressive coefficient 2 is 1.357, this indicates that increasing the X2 variable will increase the Y variable by 1.375. The coefficient is positive, meaning that there is a positive relationship between raw materials (X2) and spongecake quality.*
- *The regressive coefficient 3 is 1.321, this indicates that increasing the X3 variable will increase the Y variable by 1.321. The coefficient is positive, meaning that there is a positive relationship between processing technique (X3) and spongecake quality.*

8. Conclusion

- Ñ *The relationship between temperature or temperature on sponge cake quality results from multiple linear regression analysis testing with the t-test by obtaining the equation tcount 3.191 > t table 2.364 and a significance level of 0.015 smaller than the constant = 0.05 then Ha is accepted and Ho is rejected. so that it can be analyzed that there really is an effect of temperature or temperature in the baking process (X1) on the quality of sponge cake (Y).*
- Ñ *The relationship of raw materials to the quality of sponge cake is proven by the tcount X2 in the results of multiple regression analysis is positive with the results of the t test or hypothesis tcount 2.418 > ttable 2.364 with a significance level of 0.045 which is smaller than the constant = 0.05 then Ha is accepted and Ho is rejected, so it can be analyzed that there is an influence of raw materials (X2) on the quality of sponge cake (Y).*
- Ñ *The relationship between processing techniques and sponge cake quality can be explained on the basis of the results of regression analysis. For tcount X3 is positive and the results of the t test or hypothesis tcount 3.614 > ttable 2.364 with a significance value of 0.009 which is smaller than the determination of 0.05 then Ho is rejected and Ha is accepted, so it can be analyzed that there is an influence in terms of Processing Technique (X3) on the quality of sponge cake (Y).*

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