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Analysis of Factors Affecting the Adaptation Ability of Employees of Aviation Navigation Companies in Indonesia

Analisis Faktor - Faktor yang Mempengaruhi Kemampuan Beradaptasi Karyawan Perusahaan Navigasi Penerbangan di Indonesia

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ABSTRACT
At this time, apart from aviation safety being the main priority, the world of aviation is required to be safer, more efficient, more cost-effective, and able to increase economic growth and reduce environmental impacts. AirNav Indonesia as the only provider of aviation navigation services in Indonesia must be able to adapt to changes supported by human resource capabilities. Therefore, the role of education and training, career development, and agility can encourage the emergence of employee adaptability. This research took a sample of 125 employees at the AirNav Indonesia company, Palembang Branch Office. The collection was carried out using a non-probability sampling method. Variable measurement was carried out using a Likert scale. Data analysis shows that the education and training and agility variables have a positive and significant effect on adaptability, while the career development variable is not proven to have an effect on adaptability.
***Keywords**: Adaptability, Education and Training, Career Development, Agility.*

ABSTRAK
Pada saat ini, selain keselamatan penerbangan sebagai prioritas utama, dunia penerbangan dituntut harus menjadi lebih aman, lebih efisien, lebih hemat biaya, dan dapat meningkatkan pertumbuhan ekonomi, serta mengurangi dampak lingkungan. AirNav Indonesia selaku satu-satunya penyedia layanan navigasi penerbangan di Indonesia harus mampu melakukan adaptasi terhadap perubahan yang didukung oleh kemampuan sumber daya manusia. Oleh karena itu bagaimana peran dari pendidikan dan pelatihan, pengembangan karier, dan ketangkasan mampu mendorong lahirnya kemampuan beradaptasi karyawan. Penelitian ini mengambil sampel karyawan pada perusahaan AirNav Indonesia Kantor Cabang Palembang sebanyak 125 responden. Pengambilan dilakukan dengan menggunakan metode non probability sampling. Pengukuran variabel dilakukan dengan menggunakan skala Likert. Analisis data menunjukkan bahwa variabel pendidikan dan pelatihan dan ketangkasan berpengaruh positif dan signifikan terhadap kemampuan beradaptasi, sedangkan variabel pengembangan karier tidak terbukti berpengaruh terhadap kemampuan beradaptasi.
Kata Kunci: Kemampuan Beradaptasi, Pendidikan dan Pelatihan, Pengembangan Karier, Ketangkasan.

1. Introduction

The world of aviation is currently required to be safer, more efficient, more cost-effective, and can increase economic growth and reduce environmental impacts. The security, safety and aviation service aspects in Indonesia are not in a good enough position, so the European Union has imposed a flight ban on all Indonesian airlines from operating to all European Union member countries. This began with the arrival of the Universal Oversight Audit Program (USOAP) team to Indonesia in February 2007, to carry out inspections of civil aviation in Indonesia. The inspection found that the safety compliance value for civil aviation in Indonesia was only 54%, below the minimum international civil aviation safety standard, namely 60%. As a result, the Federal Aviation Administration (FAA) concluded that aviation safety regulations in Indonesia were not implemented properly, the supervision carried out was inadequate, and the

aviation regulations set by the International Civil Aviation Organization (ICAO) were not complied with. These sanctions lasted for 11 years until finally in mid-June 2018 the European Union only lifted the flight ban after the results of the USOAP audit from ICAO stated that the safety compliance value for Indonesian civil aviation had reached 80.34% (Hutabarat, 2019).

Reflecting on events in the past, in the future Indonesia will still be required to be able to adapt all updates to international aviation standards, which are currently the reference for implementation and direction of modernization led by the FAA and its partners through ICAO and have the opportunity to suddenly or gradually, in whole or in part, be implemented throughout the country in the world, including Indonesia. With the adjustments made, it is hoped that there will be no repeat of the slowdown in economic growth in the past due to the slow implementation of international aviation safety standards in Indonesia. AirNav Indonesia as the only flight navigation service provider in Indonesia must be able to make adjustments to updates, especially in the field of human resources. AirNav Indonesia requires human resources who must be able to adapt so that there are no obstacles in supporting the implementation of modernization of global air traffic management. Continuous education and training are important factors in adaptability. Career development is also an important factor as readiness to accept the job predicted to be given by the company and also as a method of how to manage job changes. Then Agility is also a factor of circumstances, traits and willingness to face the unknown, which is related to the ability to adapt.

2. Literature Review

O'Connell et al. (2008) revealed that an individual's adaptability can change through training and other experiences. The same thing was stated by Sony & Mekoth (2022), learning, training and continuing education are important factors in adaptability. Education and training can shape employees who have the ability to adapt to new changes, so that companies can respond to changes with appropriate adjustments.

Super & Knasel (1981) revealed that career adaptation is the abilities and practices that a person needs to adapt to work and developments in their work environment. The same thing was stated by Savickas (1997) that an important factor in readiness to accept the job predicted to be given by the company and also as a method of how to manage job changes is career adaptability. Career development can improve employee work abilities in order to strengthen the implementation of company programs.

Hall (2002) revealed that circumstances and trait factors can influence an individual's adaptability at a certain point in time. The same thing was stated by Gravett et al. (2016), agility is an ability related to adaptability and willingness to face something unknown. Therefore, it is very crucial for company employees to have agility, because it is hoped that employees' speed of adaptation can increase and be flexible to new changes. Based on these various descriptions, this research is intended to test the adaptability of employees of Indonesian navigation service companies which is influenced by education and training, career development, and agility.

3. Research Methods

This research is included in causal associative research which is aimed at identifying whether there is an influence between two or more variables using a quantitative approach (Sugiyono, 2021). This research analyzes adaptability which is influenced by education and training, career development, and agility. This research will be carried out at AirNav Indonesia Palembang Branch Office, which is located on Jalan Airport, Palembang, South Sumatra.

This research uses a saturated sample, that is, all members of the population are used as samples. Sugiyono (2021) defining a saturated sample is a sample determination technique by making all members of the population as respondents. The technique used for sampling in this research is non-probability sampling, that is, each element does not have the same

probability of becoming a research sample. The number of samples used in this research was 125 employees. Data collection techniques were carried out using observation, interviews, documentation and questionnaires. Variable measurement was carried out using a Likert scale. Data analysis was carried out using multiple linear regression analysis methods and the software used to process the data was SPSS 26.

4. Result and Discussions

Based on questionnaire data obtained from 125 respondents, respondents were predominantly male at 70.4%, respondents aged 20-30 years dominated at 44.8%, respondents' educational level is dominated by D4/S1 at 46.4%, the respondent's work period is dominated by the 6-10 year category at 49.6%, and the position level is dominated by the 10-11 level category at 64.8%.

Table 1. Respondent Characteristics

Profile	Criteria	Percentage
Gender	Man	70,4
	Woman	29,6
Age	20-30	44,8
	31-40	32
	41-50	17,6
	51-55	5,6
Level of Education	SMA/SMK	1,6
	D1	0,8
	D2	4
	D3	44
	D4/S1	46,4
	S2	3,2
Years of Service	1-5	17,6
	6-10	49,6
	11-15	8
	16-20	6,4
	21-25	10,4
	>25	8
Position Level	8-9	12
	10-11	64,8
	12-13	14,4
	14-15	8
	16	0,8

Source: Data processed by the author (2023)

Table 2 . Validity Test Results

Variable	Statement Indicator	Calculated r Value	Table r Value 5% (20)	Sig	Test results
Adaptability (KB)	KB1	0,697	0,444	0,001	VALID
	KB2	0,744	0,444	0,000	VALID
	KB3	0,806	0,444	0,000	VALID
	KB4	0,750	0,444	0,000	VALID
	KB5	0,728	0,444	0,000	VALID

Education and Training (PP)	PP1	0,880	0,444	0,000	VALID
	PP2	0,831	0,444	0,000	VALID
	PP3	0,539	0,444	0,014	VALID
	PP4	0,848	0,444	0,000	VALID
	PP5	0,785	0,444	0,000	VALID
Career Development (PK)	PK1	0,865	0,444	0,000	VALID
	PK2	0,925	0,444	0,000	VALID
	PK3	0,874	0,444	0,000	VALID
	PK4	0,922	0,444	0,000	VALID
	PK5	0,831	0,444	0,000	VALID
Agility (KT)	KT1	0,808	0,444	0,000	VALID
	KT2	0,770	0,444	0,000	VALID
	KT3	0,902	0,444	0,000	VALID
	KT4	0,834	0,444	0,000	VALID
	KT5	0,693	0,444	0,001	VALID

Source: Data processed by the author (2023)

Based on the results of the validity test in table 2, it is known that the calculated r value of all statement indicators is greater than the table r value, namely 0.444 and has a significance value of <0.05. In this way, all statement indicators for all variables are declared valid and can be used for further testing.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Cut of Point	Test Results
Adaptability (KB)	0,793	0,60	RELIABLE
Education and Training (PP)	0,834	0,60	RELIABLE
Career Development (PK)	0,923	0,60	RELIABLE
Agility (KT)	0,850	0,60	RELIABLE

Source: Data processed by the author (2023)

Based on the reliability test results in table 3, it is known that the Cronbach's Alpha value for all variables is >0.60. Thus, all statements on each research variable are declared reliable.

Table 4. Descriptive Analysis Results

Variable	Statement Indicator	Percentage Distribution of Respondents' Answers				
		STS (1)	TS (2)	KS (3)	S (4)	SS (5)
Adaptability (KB)	KB1	0	0	1,6	44,0	54,4
	KB2	0	0	0,8	53,6	45,6
	KB3	0	0	0,8	52,0	47,2
	KB4	0	0	0,8	47,2	52
	KB5	0	0	4,0	58,4	37,6
Education and Training (PP)	PP1	0	0	12	55,2	32,8
	PP2	0	0	8	51,2	40,8
	PP3	0	0	3,2	56	40,8
	PP4	0	0	4,8	51,2	44
	PP5	0	0	5,6	49,6	44,8
Career Development (PK)	PK1	0,8	2,4	27,2	36,8	32,8
	PK2	0	0	21,6	48	30,4
	PK3	0	4,8	32	36,8	26,4
	PK4	0	1,6	22,4	51,2	24,8
	PK5	0	0	8	52,8	39,2
Agility (KT)	KT1	0	0	1,6	52	46,4

	KT2	1,6	1,6	12	59,2	25,6
	KT3	0	0,8	4,0	56	39,2
	KT4	0	0	10,4	53,6	36
	KT5	0	0	1,6	49,6	48,8

Source: Data processed by the author (2023)

Based on the results of the questionnaire distributed, on the adaptability variable (KB), the answer strongly agree (SS) was the answer of the majority of respondents on the statement indicators KB1 (54.4%) and KB4 (52%), the answer of respondents agree (S) was the answer of the respondent most in the statement indicators KB2 (53.6%), KB3 (52%), and KB5 (58.4%). In the education and training (PP) variable, the respondent's answer of agree (S) was the most respondent's answer in all statement indicators, namely PP1 (55.2%), PP2 (51.2%), PP3 (56%), PP4 (51.2%), PP5 (49.6%). In the career development (PK) variable, the respondent's answer of agree (S) was the highest number of respondents in all statement indicators, namely PK1 (36.8%), PK2 (48%), PK3 (36.8%), PK4 (51, 2%), PK5 (52.8%). In the agility variable (KT), the respondent's answer of agree (S) was the highest number of respondents in all statement indicators, namely KT1 (52%), KT2 (59.2%), KT3 (56%), KT4 (53.6%), KT5 (49.6%).

Table 5. KMO-MSA and Bartlett's Test Results

Variable	KMO-MSA	Bartlett's Test	Test Results
Adaptability (KB)	0,713	0,000	WORTHY
Education and Training (PP)	0,655	0,000	WORTHY
Career Development (PK)	0,769	0,000	WORTHY
Agility (KT)	0,793	0,000	WORTHY

Source: Data processed by the author (2023)

Based on the results of the KMO-MSA and Bartlett's Test in table 5, it is known that the KMO-MSA value for all variables is >0.5 and the Bartlett's Test value for all variables is <0.05. In this way, all statement indicators for all variables are declared suitable for further processing using factor analysis techniques.

Table 6. Results of Anti-Image Correlation Values and Component Score Coefficient Matrix

Variable	Statement Indicator	Anti-Image Correlation Values	Component Score Coefficient Matrix
Adaptability (KB)	KB1	0,720	0,353
	KB2	0,749	0,283
	KB3	0,700	0,353
	KB4	0,691	0,277
	KB5	0,709	0,274
Education and Training (PP)	PP1	0,664	0,390
	PP2	0,682	0,339
	PP3	0,603	0,217
	PP4	0,657	0,369
	PP5	0,639	0,337
Career Development (PK)	PK1	0,755	0,290
	PK2	0,735	0,301
	PK3	0,795	0,285
	PK4	0,776	0,269
	PK5	0,815	0,234
Agility (KT)	KT1	0,789	0,300
	KT2	0,832	0,206

	KT3	0,802	0,298
	KT4	0,788	0,309
	KT5	0,776	0,296

Source: Data processed by the author (2023)

Based on the results of the Anti-Image Correlation value in table 6, it is known that the Anti-Image Correlation value of all statement indicators on all variables is >0.5, this shows that among the five statement indicators on each variable there is a strong relationship and is worthy of in further processing using factor analysis techniques. Based on the results of the Component Score Coefficient Matrix in table 6, it is known that the five statement indicators for each variable become 1 factor variable, thus proving that the five statement indicators for each variable are truly capable of measuring each of these variables. The indicators KB1 (0.353) and KB3 (0.353) are the most dominant indicators in determining the level of the adaptability variable (KB). The PP1 indicator (0.390) is the most dominant indicator in determining the level of education and training (PP) variables. The PK2 indicator (0.301) is the most dominant indicator in determining the level of the career development (PK) variable. The KT4 indicator (0.309) is the most dominant indicator in determining the high and low levels of the agility variable (KT).

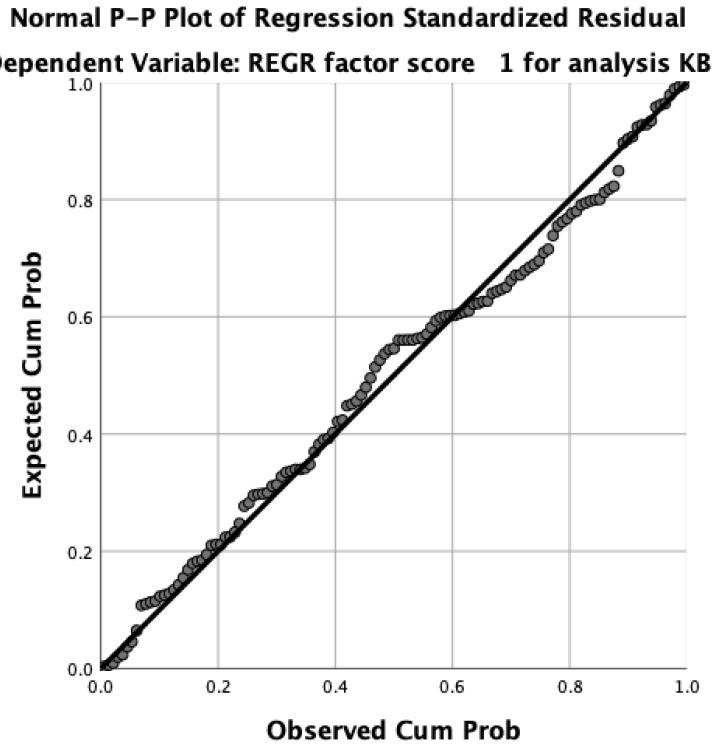

Fig. 1. Normality Test Graph

Source: Data processed by the author (2023)

Based on the graph of normality test results in Figure 1, normality can be detected by paying attention to the distribution of points on the diagonal axis on the graph. The regression model is said to meet the normality assumption if the data spreads around the diagonal line, so it is concluded that the data meets the normality assumption. The researcher also carried out a statistical test, namely the one sample Kolmogorov-Smirnov Test with the result of a residual significance value of 0.200, namely >0.05, so the data was declared normally distributed.

Table 7. Multicollinearity Test Results

Independent Variable	Collinearity Statistics	
	Tolerance	VIF
Education and Training (PP)	0,728	1,373

Career Development (PK)	0,835	1,198
Agility (KT)	0,745	1,342

Source: Data processed by the author (2023)

Based on the multicollinearity test results in table 7, it is known that each independent variable has a tolerance value >0.10 and a VIF value <10, therefore it is concluded that multicollinearity does not occur in the independent variables (there is no correlation between independent variables).

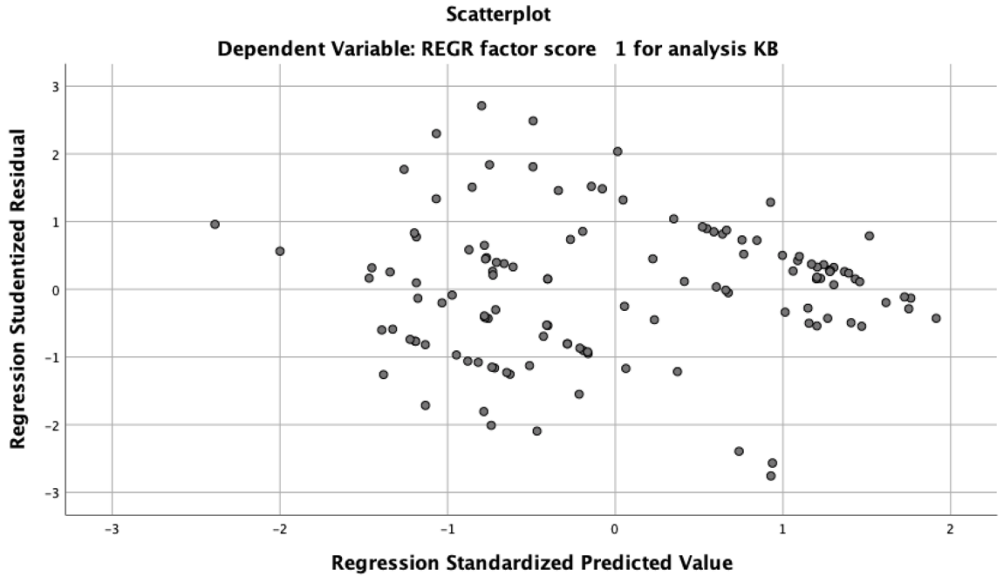

Fig. 2. Scatterplot Heteroscedasticity Test Results

Source: Data processed by the author (2023)

Based on the image of the scatterplot heteroscedasticity test results in Figure 2, it can be seen that the points are spread randomly both above and below the number 0 on the Y axis, there is no particular pattern such as widening, narrowing, or congregating in the middle, and vice versa. This can be concluded that heteroscedasticity does not occur in the regression model.

Table 8. Glejser Test Results

Independent Variable	Significance Value	Cut of Point
Education and Training (PP)	0,054	0,05
Career Development (PK)	0,687	0,05
Agility (KT)	0,270	0,05

Source: Data processed by the author (2023)

The researcher also carried out statistical tests using the Glejser test in table 8. It was found that all the significance values of the independent variables were >0.05, therefore it was concluded that all the independent variables contained in this model had the same distribution or there were no heteroscedasticity problems.

Table 9. Multiple Regression Test Results

Variable	Coefficient Value
Constant	3,659E-16
Education and Training (PP)	0,207
Career Development (PK)	-0,032
Agility (KT)	0,531

Source: Data processed by the author (2023)

Based on the results of the multiple regression test in table 9, it is known that the multiple regression equation obtained is KB = 3.659E-16 + 0.207 PP + (-0.032) PK + 0.531 KT + ε. If the coefficient value of the education and training, career development, and agility variables

is constant or equal to zero, then the coefficient value of the adaptability variable is 3.659E-16. The coefficient value of the education and training variable is 0.207, while the agility variable is 0.531. A positive sign indicates a change in the direction of the education and training variable and the agility variable towards the adaptability variable. If education and training increases by one unit, then the employee's adaptability will also potentially increase by 0.207 assuming other variables remain constant. If agility increases by one unit, then the employee's adaptability will also potentially increase by 0.531 assuming other variables remain constant. The coefficient value of the career development variable is -0.032, meaning that the career development variable has a negative regression coefficient on the adaptability variable. If career development increases by one unit, then adaptability will potentially decrease by 0.032 assuming the other variables remain constant.

Table 10. Partial Significance Test Results (t Test)

Independent Variable	Calculated t Value	Table t Value	Significance
Education and Training (PP)	2,541	1,979	0,012
Career Development (PK)	-0,418	1,979	0,677
Agility (KT)	6,586	1,979	0,000

Source: Data processed by the author (2023)

Based on the results of the partial significance test (t test) in table 10, the calculated t value of the education and training variable is 2.541 > table t value 1.979. The significance value of the education and training variable is 0.012 <probability value 0.05. This proves that the education and training variables partially have a positive and significant effect on the adaptability variable, thus employee adaptability can be improved through education and training. The research results obtained are in line with the statement of O'Connell et al. (2008) reveals that an individual's adaptability can change through training and other experiences. Likewise with statements of Sony & Mekoth (2022), learning, training and continuing education are important factors in adaptability. The results of this research also support previous research conducted by Nur Zuhri and Luky Dwiantoro in 2015 proves that adaptability can be improved effectively through training. Then it also supports previous research conducted by Soeroso R., Ujianto, and Slamet Riyadi in 2020 proves that training culture has a significant effect on adaptability. And also supports previous research conducted by Hesti Respatiningsih, Anes Arini, and Bayu Kurniawan in 2020 proves that training and guidance programs influence the ability to adapt in facing environmental changes in the Industrial Revolution 4.0 era.

The calculated t value of the career development variable is -0.418 < t table value 1.979 and the significance value of the career development variable is 0.677 > probability value 0.05. This proves that the partial career development variable is not proven to have an effect on the adaptability variable, thus whether an employee's career develops or does not develop, this will not affect the employee's adaptability. The research results obtained are not in line with the statement of Mangkunegara (2013) states that career development aims to improve the implementation of employee work more effectively and efficiently which aims to achieve satisfactory results, strengthen the implementation of company programs, and achieve company goals. Then statement of Super & Knasel (1981) reveals that career adaptation is the abilities and practices that a person needs to adapt to work and developments in their work environment. As well as statements of Savickas (1997) revealed that an important factor in readiness to accept the job predicted to be given by the company and also as a method for managing job changes is career adaptability. However, the results of this study support previous research conducted by Soeroso R., Ujianto, and Slamet Riyadi in 2020 which proves that the influence of career opportunities on adaptability is known to be insignificant.

The calculated t value of the agility variable is 6.586 > t table value 1.979. The significance value of the agility variable is 0.000 < probability value 0.05. This proves that the agility variable partially has a positive and significant effect on the adaptability variable, thus the employee's adaptability is greatly influenced by the agility within the employee. The research results obtained are in line with the statement of Hall (2002) reveals that circumstances and trait factors can influence an individual's adaptability at a certain point in time. Then statement of Gravett et al. (2016) reveals that abilities are related to self-adjustment and desire to face something unknown. Likewise with statements of Baran & Bible (2019) states that to handle the changes faced, agility becomes very important for organizations. The results of this research also support previous research conducted by Bohdana Sherehiy and Waldemar Karwowski in 2014 shows that developing strong collaborative relationships within an organization with customers and suppliers can increase workforce agility in small manufacturing companies. The results of this research can be used to optimize working demands and conditions in workplace environments that require constant change and adaptation.

Based on the results of the simultaneous significance test (F Test), the calculated F value is 28.499, this value is greater than the F table value of 2.68 (28.499 > 2.68). The analysis result of the significance value is 0.000, this value is smaller than the probability value of 0.00 (0.000 < 0.05). This proves that the education and training variables, career development variables, and agility variables simultaneously have a positive and significant effect on the adaptability variable. Meanwhile, the coefficient of determination (R Square) test results shows that the value of the coefficient of determination (R Square) is 0.414, which means that the contribution of the influence of education and training, career development and agility together or simultaneously on adaptability is 41.4% and the remaining 58.6% is influenced by other factors not included in the scope of this research.

5. Conclusion

Based on the results of research analysis and discussion of the results of hypothesis testing that has been carried out, it can be concluded that education and training as well as agility have proven to have a positive and significant effect on adaptability. Meanwhile, career development has not been proven to have an effect on adaptability. This research shows that the better the education and training that employees undergo and the higher the agility that employees have, the higher the employee's adaptability will be. Meanwhile, whether an employee's career develops or not does not affect the employee's adaptability.

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