

Measuring Properties of the Nationalism Employees Scale in Foreign Companies using Rasch Analysis *Indonesian Validation*

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Abstract: The sense of employee nationalism in foreign companies diverges tremendously. This can be understood from the way employees think and act in the work. This paper examines the psychometric properties of the Nationalism Employees Scale (NES) in foreign companies' research. The study used survey method and data analysis based upon the framework of modern psychometrics approach. The NES was validated using 50 Indonesian employees who works in various foreign companies in Indonesia. In this study Rasch Model was used to measure the psychometrics properties of the 17 items of NES. The results of this study showed that the NES fulfilled by evidence as a valid research instrument because of its psychometric properties and internal consistencies. This instrument has a very high quality of validity and reliability to be applied in projecting the nationalism of employees working in foreign companies. The implications of research result for Indonesia's employees who work in a foreign company to maintain a sense of their nationalism as the love of his homeland, are able to filter the incoming foreign culture and follow any national activity.

1 INTRODUCTION

Indonesia is country rich in natural resources, so as to make foreign companies to invest in Indonesia, so that Indonesia does little citizens who work for foreign companies. The patterns and rules that exist in the foreign companies, also affects the degree of nationalism of Indonesia workers in foreign companies. In addition, attitudes, culture and scenery of the workers also contributed to the development of the country of Indonesia in the future (Kahin, 1952).

However, when workers in a foreign live too long with different cultures, slowly and imperceptibly will follow existing behavior on culture in the neighborhood. However, not all individuals can be changed easily. There are also individuals who have the solidity in his personality which makes it upright in culture and beliefs adhered, their love against the land result birth remains inherent in his true identity (Feshbach, 1994). Thus, love is the basis of loyalty workers in

foreign companies for maintaining a culture of the nation and the State. The love is referred to as a sense of nationalism.

A person's sense of nationalism in everyday life become the image of the future national development. Nationalism is high, it is assumed to become the nation's success in an effort and instill a sense of love of the motherland (Kohn, 1958). Therefore, when individuals working in foreign companies or companies in any country is still very necessary sense of nationalism to scent the nation's name as an expression of thanks for the life that was obtained to date are It is one of the nation's efforts and the State embodies the cultural community love the motherland.

Citizens of a nation must have a political identity in which the identity is implanted since we were born, since education. In Indonesia alone, the planting of the concept of political identity is manifested in the commemoration of the national identity, such as the admonition of the youth oath, August 17, the ceremony every Monday, and so on.

All of which are attempts to foster an awareness of political identity and an attempt to instill a sense of nationalism.

The sense of nationalism is important for every citizen to be able to love and defend his country with all his heart (Fatmawati et al., 2018; Hidayat and Widjanarko, 2008). Nationalism is etymologically derived from the word "national" and "ism" which is a nationalism that contains the meaning of consciousness and the spirit of love of the country, has pride as a nation, or maintains the honor of the nation, has a sense of solidarity with the unfortunate and disadvantages of the country's brothers, countrymen and countrymen and uphold the value of unity and unity (Julyani, 2016). From that sense, nationalism can be interpreted as a philosophy of nationalism and a high level of love for the country that must be owned by the citizens, feeling the same history and ideals in the aims of nation and state.

Nationalism is understood within the framework of ideology, then it contains the following aspects: (1) cognitive; (2) goal/value orientation; (3) strategic. The cognitive aspect presupposes the need for knowledge or understanding of the social, economic, political and cultural situation of the nation. So, nationalism is the abstract mirror of the concrete life state of a nation. The active role of intellectuals in the formation of the national spirit is very important because they must sum up the lives of all the children of the nation and pour it as an element of shared ideals that want to be fought. Soedjatmoko said that nationalism cannot but be intelligent nationalism because that nationalism must be illuminated by the wisdom, understanding, knowledge and awareness of history (Hakim, 2015). Aspects of the goal point to the ideal, goal or hope of the ideal together in the future who want to be realized or fought in the community and the country. These ideals cover all aspects of human life both social, economic, political, ideological, cultural, etc. which is mutually agreed upon. The strategic aspect demands nationalist struggle for the struggle to achieve the common goal, it can be physical or diplomatic, moral or spiritual struggle, can be moderate or radical, clandestinely or openly, and so on. Which one you choose will depend on the situation, the concrete conditions and the local time that a nation faces.

In the context of the national state, nationalism faces an increasingly strong challenge due to the process of globalization with the strengthening of ethnicity and religious behavior. Daniel Bell in *The End of Ideology* mentions "Nationalism as an ideology has come to an end" (Hakim, 2015).

Indonesia, a country of "Bhinneka Tunggal Ika" consisting of various tribes, cultures, and languages necessarily need to foster a sense of nationalism to its citizens. The sense of nationalism is intended that Indonesian citizens can love with their country as a whole and also so as not easily affected by the onslaught of foreign culture that is currently many in number (Nisvilyah, 2013; Z, 2013). The presence of globalization certainly brings influence to the life of a country including Indonesia. These influences include both the positive and negative effects. The influence of globalization in various fields of life such as political life, economy, ideology, social culture and others will affect the values of nationalism to the nation (Hartanto, 2009; Oetama, 2001).

The purpose is achieved in this research is through modelling Rasch, author of (1) test model theoretic related nationalism employees in foreign companies, (2) measure the nationalism of the employees in foreign companies. Therefore, in this article, we discussed the results of a survey on the questionnaire of Indonesian nationalism of workers in foreign companies using Rasch Model.

The Rasch model is a highly developed response item theory approach and has drawn enormous attention from social scientists who want objective measurement (Slinde and Linn, 1979; Smith and Miao, 1994; Stemler, 2004).

Recently, it remains puzzling that those who set themselves up as scientists of the human condition, especially those in psychological, health, and educational research, would accept their ordinal-level 'measures' without any apparent critical reflection, when they are not really measures at all (Bond and Christine M. Fox, 2015).

The advantages of Rasch model include: (1) giving a luminous size; (2) resolve missing data; (4) make a more robust measurement estimate, (4) can find unusual and unusual response patterns of items or persons, and (5) create more independent instruments (Bond and Christine M. Fox, 2015; Rangka et al., 2017; Sumintono and Widhiarso, 2014, 2015).

2 METHODS

Data collection was conducted on 50 people (male = 17 people, female = 33 people) employees to foreign companies operating in Jakarta. The number of employees based on the region of origin of the company includes Asia (41 people), Europe (5 people), Australia (1 person), and America (3

people). Age of respondents 18 - 40 years, with a working duration 1 - 15 years.

The NES contains 21 items of statements developed based on the spirit of love of the homeland, with 5 choices of answers in Likert scale. All answer choices are positive and participants expressed the degree to which each item represents them using a scale of 1 (disagree) to 5 (strongly agree). Prior to data collection, NES went through a weighing phase in terms of language by an Indonesian expert.

The NES is administered from September, 17, 2017 to December, 23, 2017. The informed consent was given before the respondents participated in the study, and no respondents refused to attend the study. Furthermore, there is no credit earned by employees from the companies where the respondent works for his/her participation in this research.

The results of the data collection were analysed using Rasch Model as it was considered as a good way to reporting results on estimating reliability components, separation index, Test Information Function, Partial Credit Model (PCM), Unidimensional through Principal Component Analysis (PCA), Person Fit and measure, Item Fit and measure, and Item Difficulty. To perform the analysis, we used WINSTEPS 3.73 (Linacre, 2006).

3 RESULTS AND DISCUSSIONS

3.1 Test Reliability and Separation Index

Reliability of the scale was evaluated using two statistics, the person separation index and Cronbach's alpha (Cronbach, 1951). More specifically, the estimate of reliability is divided into three parts, namely (1) item reliability, (2) person reliability, and (3) reliability of interaction between person and item. The results of reliability and separation index are presented in Table 1.

Table 1: Item-person summary measured (N=50, Item=21).

Items		Person	
Mean		Mean	
0.00		0.89	
SD		SD	
0.75		0.56	
Reliability	0.94	Reliability	
Separation Index	3.84	0.72	
		Separation Index	
		1.60	
S.E Item Mean	0.17	S.E Mean	
		0.08	
Item-Person Reliability		0.70 -- Cronbach	
Alpha (KR-20)		Person Raw Score "Test"	
Reliability			

Table 1 showed that the mean person measure +0.89 logit (>0.00 logit) shows the tendency of all respondents to answer agree on the whole statement in the instrument. The interaction between items with respondents when administering NES with the Alpha Cronbach formula of 0.70 indicated is good enough.

The reliability of NES instrument items is known as 0.94. This indicates that the items contained in the NES have excellent quality. Unfortunately, there is a difference between the separation index value on the item and person in administering NES. Separation index refers to the ability of NES in grouping or identifying the number of groups that can be measured in NES.

The value of the separation index on the item is 3.84 or close to 4. This means that the ability of items in the NES is only capable of distinguishing the ability of respondents in four groups. Meanwhile, the value of separation index on items is not matched by the value of separation index in person 1.60 or near 2. The ability of person or respondent in this research only 2 group only.

3.2 Threshold: Partial Credit Model (PCM)

PCM is essential in the estimation of a measurement model. In a developed instrument, it is necessary to obtain a verification of the rating of answer options used in NES. The PCM estimate as shown in Table 2

Table 2: The magnitudes of the partial credit model of NES.

Label	Statement	Observed Average	Andrich Threshold
1	Strong Disagree	-0.16	None
2	Disagree	-0.14	-1.46
3	Neither agree or disagree	0.42	-0.20
4	Agree	1.04	-0.28
5	Strong Disagree	1.57	1.93

Based on Table 2 it is known that the observed average PCM estimates and Andrich Threshold increases and moves monotonically, i.e. from the smallest logit value to the largest logit value. This indicates that respondents can distinguish precisely the alternative answer option on NES. In other words, there is no confusion among respondents with alternative answers provided when NES is administered. This is evident in Figure 1.

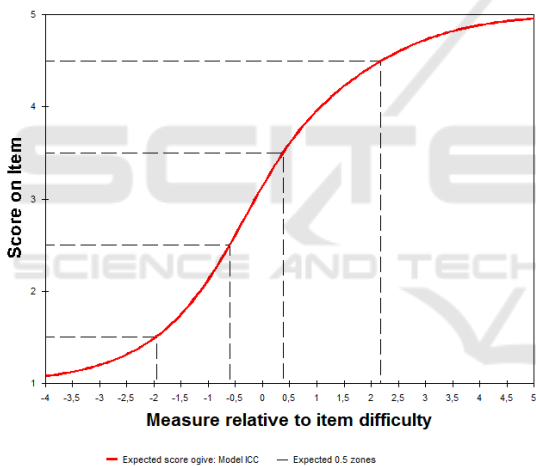


Figure 1: Expected score based on item characteristic curve of NES.

Expected Score ICC plots the model-expected item characteristic curve, also called the Item Response Function, IRF. This shows the Rasch-model prediction for each measure relative to item difficulty. Its shape is always ascending monotonic. The dashed lines indicate the Rasch-half-point thresholds correspond to expected values of .5 score points (Linacre, 2018).

3.3 Principal Component Analysis (PCA)

We evaluate whether NES as a developed instrument is capable of measuring the constructs to be measured. The construct is the nationalism of employees in foreign companies.

In Rasch modelling used PCA. An ideal of the Rasch model is that all the information in the data be explained by the latent measures. Then the unexplained part of the data, the residuals, is, by intention, random noise (Linacre, 2018; Sumintono and Widhiarso, 2014, 2015).

Table 3: Standardized residuals variance (in Eigenvalue units).

	Observed	Expected
Total raw variance in observations	100.0%	100.0%
Raw variance explained by measures	37.3%	37.1%
Raw variance explained by persons	7.7%	7.7%
Raw Variance explained by items	29.6%	29.5%
Raw unexplained variance (total)	62.7%	62.9%
Unexplained variance in 1st contrast	13.2%	13.2%
Unexplained variance in 2nd contrast	7.3%	7.3%
Unexplained variance in 3rd contrast	6.1%	6.1%
Unexplained variance in 4th contrast	5.4%	5.4%
Unexplained variance in 5th contrast	4.4%	4.4%

The total raw variance in observations measurement result shows a percentage of 37.3%. This indicates that the unidimensional test requirements are met ($\geq 20\%$). Other things, namely the variance that cannot be explained by the research instruments in sequence are 13.2%, 7.3%, 6.1%, 5.4%, and 4.4%. It shows the ideal condition of measurement because the percentage of variance that cannot be observed does not exceed the measurement tolerance limit of 15% (Fisher, 2007).

3.4 Person Fit

Personality match index is also an aspect to be considered in developing an instrument. From 50 respondents, we investigated responding patterns of

respondents when NES was administered and found respondents who were distorted in filling NES.

The criterion of fit person is obtained from mean INFIT MNSQ + Standard Deviation person measure. Based on the estimate, the value of fit person criteria on NES is $1.13 + 0.68 = 1.81$. The criterion of fit person (1.81) is then compared with the amount of INFIT MNSQ of each respondent. From 50 respondents found four respondents who have INFIT MNSQ value greater than the criteria of person fit (1.81), i.e. respondent no. 44, no. 28, no. 15, and no. 29.

3.5 Item Fit and Item Measure

As with any person measure, we also check the item fit in NES to determine which items are unsuitable when NES is administered.

By using the same estimation method with the person fit, it is known Criteria item fit NES of 1.21. Based on the findings, found four items, namely item no. 6, no. 1, no. 19, and no. 11 as non-fit items.

Table 4: Unfit and difficulty item estimation.

Item No.	Item statement
6	Shows the solidarity of fellow Indonesian workers in the Company
1	I work hard at this company to boast Indonesia
19	Associating with foreign workers is more convenient because they are more objective in everything than workers from Indonesia
11	As long as I work well, that's enough. No need to think beyond that much less Indonesia

Furthermore, the non-fit items have a linear correlation with the estimated result of the measure item. The four items in question are items that have a high degree of difficulty to be approved by all respondents involved in administering NES.

3.6 Test Information Function

X axis shows abilities of respondents in answering NES, and Y axis shows the amount of information function obtained by the researcher.

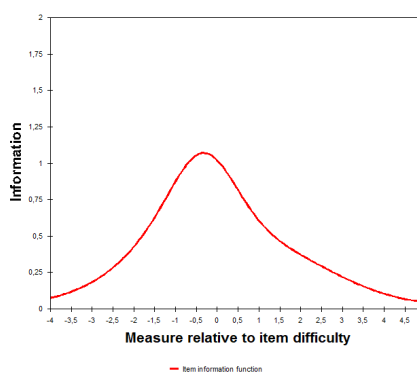


Figure 3: Test information function of NES.

Based on the information function presented in Figure 3, it can be concluded that 21 items in NES administered to 50 respondents indicate items contained in NES can only produce optimal measurement information for respondents who have moderate to moderate nationalism.

3.7 Final Instruments of NES

Interest in mental test theories has generally focussed on items rather than persons. This is true of both traditional classical test theory (CTT) which is centered on the item (or test) based notion of reliability and latent trait theories which focus on the item response curve. Concern for what people do in tests has generally been limited to estimating their abilities.

The development and validation of NES aims to identify the degree of nationalism of employees, especially in Indonesia. After analysing the results of NES property measurements, some interesting things were found in instrument development or psychological scale.

Instrument reliability index of both person, item and interaction both (person-item) is good. Instrument validity analysis through PCA has also fulfilled the requirements. The respondents are also not confused with the choice of answers provided in the NES. Although the findings are satisfactory, some measurement components still require revision.

First, on the person fit estimation found 4 respondents indicated giving response pattern that is not suitable or different from 46 other respondents. The four respondents were people who had a tendency to give maximum approval to various items within the NES. This practically makes NES ability in identifying nationalism of 4 respondents is not optimal. The four respondents were dropped from data analysis and measurement considerations.

This means that if a respondent does not answer an item, that data need not be discarded from a study. Also, using the Rasch model permits construction of different forms of a test, but all respondents can be expressed on the same scale. Use of the model yields great benefits, but researchers must thoroughly and carefully evaluate whether or not the data fit the model. When data do not appear to fit the model expectations, some sort of divergence exists in respondents' answers to the items and the theory that was used to generate items for the instrument along a single variable (Boone et al., 2013).

Second, on item fit and item measure found 4 items that exceed the measurement criteria in Rasch modelling. The four items are a set of items that are considered the most difficult to be approved by the respondents as a whole. Based on these findings, we consider the four instruments to be dropped from NES and no longer used in administering NES.

4 CONCLUSIONS

Based on the results of the analysis can be concluded that the NES has met the criteria instrument with good measurement property and internal consistency. There is a change in the number of items in NES of 21 items pre-validation to 17 items post-validation.

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REFERENCES

- Bond, T. G., and Christine M. Fox, 2015. *Applying the Rasch Model Fundamental Measurement in the Human Sciences*, Routledge Taylor and Francis Group. New York, Third Edition.
- Boone, W. J., Staver, J. R., Yale, M. S., 2013. *Rasch analysis in the human sciences*, Springer Science and Business Media.
- Cronbach, L. J., 1951. Coefficient alpha and the internal structure of tests, *Psychometrika*, 16(3), 297–334.
- Fatmawati, L., Pratiwi, R. D., Erviana, V. Y., 2018. Pengembangan Modul Pendidikan Multikultural Berbasis Karakter Cinta Tanah Air dan Nasionalis pada Pembelajaran Tematik, *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, 8(1), 80–92.
- Feshbach, S., 1994. Nationalism, patriotism, and aggression, *In Aggressive behavior* (pp. 275–291). Springer.
- Fisher, W. P., 2007. Rating scale instrument quality criteria, *Rasch Measurement Transactions*, 21(1), 1095.
- Hakim, M. A., 2015. Repositioning Pancasila Dalam Pergulatan Ideologi-ideologi Gerakan Di Indonesia Pasca-reformasi. *Kontemplasi: Jurnal Ilmu-Ilmu Ushuluddin*, 4(1).
- Hartanto, F., 2009. *Paradigma baru manajemen Indonesia: menciptakan nilai dengan bertumpu pada kebajikan dan potensi insani*.
- Hidayat, K., Widjanarko, P., 2008. *Reinventing Indonesia: menemukan kembali masa depan bangsa*. PT Mizan Publika.
- Julyani, P. H., 2016. *Peranan kegiatan ekstrakurikuler pasukan pengibar bendera dalam menumbuhkan sikap nasionalisme siswa (Studi Deskriptif Analisis di SMP Negeri 2 Anjatan Indramayu)*. FKIP UNPAS.
- Kahin, G. M., 1952. *Nationalism and revolution in Indonesia*, SEAP Publications.
- Kohn, H., 1958. *Nasionalisme, arti dan sedjarahnja* (Vol. 26). PT Pembangunan.
- Linacre, J. M., 2006. *WINSTEPS Rasch measurement computer program*, WINSTEPS. Com. Chicago.
- Linacre, J. M., 2018. *Expected Score ICC, IRF*.
- Nisvilyah, L., 2013. *Toleransi Antarumat Beragama Dalam Memperkokoh Persatuan Dan Kesatuan Bangsa (Studi Kasus Umat Islam Dan Kristen Dusun Segaran Kecamatan)*. Ejournal.unesa.ac.id.
- Oetama, J., 2001. *Berpikir ulang tentang keindonesiaan*.
- Rangka, I. B., Prasetyaningtyas, W. E., Satrianta, H., Folastris, S., 2017. Profil Perencanaan Karir Siswa Sekolah Menengah Kejuruan dengan Pemodelan Rasch Berdasarkan Jenis Kelamin, *Konselor*, 6(2), 39–48.
- Slinde, J. A., Linn, R. L., 1979. The Rasch model, objective measurement, equating, and robustness, *Applied Psychological Measurement*, 3(4), 437–452.
- Smith, R. M., Miao, C. Y., 1994. Assessing unidimensionality for Rasch measurement, *Objective Measurement: Theory into Practice*, 2, 316–327.
- Stemler, S. E., 2004. A comparison of consensus, consistency, and measurement approaches to estimating interrater reliability, *Practical Assessment, Research and Evaluation*, 9(4), 1–19.
- Sumintono, B., Widhiarso, W., 2014. *Aplikasi model Rasch untuk penelitian ilmu-ilmu sosial (edisi revisi)*. Trim Komunikata Publishing House.
- Sumintono, B., Widhiarso, W., 2015. *Aplikasi pemodelan rasch pada assessment pendidikan*. Trim Komunikata.

Z, M., 2013. Kesadaran multikultural dan deradikalisasi pendidikan Islam: pengalaman Bhinneka Tunggal Ika dan Qabul al-Akhar. *Ejournal.uin-Suka.ac.id*.

