

Aligning Tax Incentives and Purchasing Behavior for Consumers of Environment-Friendly Products

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Abstract: The growth in purchasing environmentally friendly products has stagnated. It is thought to have been caused by the presence of a premium image attached to environmentally friendly products, thus creating a reluctance for consumers to have aggressive purchasing behavior towards these environmentally friendly products, so that the researcher raises a tax incentive variable which is expected to reduce the gap that occurs. This research is expected to be able to provide recommendations regarding policies regarding tax incentives for environmentally friendly products. The method of this research is by using a survey and analyzed using multiple regression by including tax incentives as a moderating variable, to prove whether tax incentives can reduce the gap between attitudes and behaviors that appear in the phenomenon of purchasing environmentally friendly products.

Keywords: *Theory of Planned Behavior, Social Dilemma Theory, tax incentives, environmentally friendly products*

I. INTRODUCTION

Environmentally friendly product innovation, which has been a global movement for decades, has not been able to become a significant driver for Indonesians to participate in promoting the use of these products. Although many pilot efforts have been made, compared to other countries, Indonesia is still far behind in terms of both the quality of innovation and the number of products absorbed by the market [1]. Procedures that have an impact on the emergence of costs for ecolabel standardization [2], accompanied by a "premium" image on eco-friendly products make the price of environmentally friendly products higher than prices with similar qualifications that are not labelled as environmentally friendly. Premium image, in this case, refers to the additional costs that must be paid by consumers to obtain a product with a higher environmental performance [3].

The introduction of environmentally friendly products starts with the expansion of the green marketing movement, which is chosen to increase competitiveness in global competition. Producers are choosing various terms such as green packaging, green product, green advertising and various other green designations to present an environmentally friendly perception to increase the buying interest [4]. However, the narrow market for environmentally friendly products is still confirmed by the results of various previous

studies, where the various factors that shape this phenomenon are largely determined by consumer perceptions [5][6].

The discussion on forming consumer perceptions which then leads to behavior to use environmentally friendly products is thought to be influenced by various factors. Previous studies have found that value, risk and trust factors are the dominant factors in the formation of consumer perceptions, especially about the use of environmentally friendly products [7]. Besides, the factors of trust and satisfaction will form loyalty in using environmentally friendly products [8]. Some of these previous studies are more or less influenced by the main constructs of Theory Planned Behavior which have antecedents in the form of attitudes, subjective norms, and perceptions of controlling behavior [9]. In a more specific context for shaping environmentally friendly perceptions, the Theory Planned Behavior turns into a more specific construct into environmentally friendly subjective norms, preservation attitudes, and perceptions of environmentally friendly behavior controllers [10].

Previous research that has been conducted only captures the phenomenon that is an antecedent of the behavior of using environmentally friendly products [11] [10] [7], but no one has tried to provide a solution to increase the growth rate of use. Eco-friendly product. This study looks at how perceptions of behavioral controllers consisting of concern for the consequences of environmental responsibility, Moral obligation, self-identity, and individual reluctance to obtain environmentally friendly products can shape the behavior of purchasing environmentally friendly products [11], as well as adding a moderating variable in the form of tax incentives [12] as a factor that is thought to have a positive influence on the formation of buying behavior for environmentally friendly products.

The findings of this study are expected to be able to provide a solution to the problem of stagnating growth in the purchase of environmentally friendly products by seeing whether, so far, the higher price factor which is an obstacle to shaping the behavior of purchasing environmentally friendly products can be overcome by policy intervention by the government in the form of providing tax incentives on environmentally friendly products.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A. Theory of Planned Behavior/TPB

Talking about individual behavior cannot be separated from the Theory of Planned Behavior [9] and Theory of Reasoned Action / TRA [13] models. Individual behavior cannot be separated from the three main components, namely attitudes, subjective norms, and perceptions of controlling behavior [13]. These three components are also used as the basis for previous research to investigate further the purchasing eco-friendly products [14]. However, in the context of purchasing behavior for environmentally friendly products, further studies found a gap between attitudes and behavior [15].

The gap that exists between consumer attitudes and behavior presents a social dilemma, especially in a context where there are individuals who care about environmental preservation and make it happen in their purchasing behavior. Still, some do not buy behavior like the first group, but also cannot be judged that they don't have good environmental awareness. This gap is often called the Social Dilemma Theory [16].

This research tries to explore the possibility that tax incentives can be an external factor that can strengthen internal factors that exist in consumers, thereby reducing the gap between attitudes and behavior, especially in purchasing environmentally friendly products, especially in addressing the problem of reluctance caused by the emergence of premium image consequences that must be borne by consumers [3]

B. Tax Incentive

Incentives are an effort to provide relief, such as in the field of taxation by reducing paid taxes or in the form of providing subsidies and other benefits to incentive recipients (Suhardjana, 2009). The government, in this case, has facilitated efforts to encourage an environmentally friendly movement, by issuing a policy in the form of Government Regulation No. 46 of 2017 concerning Environmental Economic Instruments which in article 31 regulates the opportunity to provide incentives as an environmental, economic instrument in a fairly broad form and scope [17]. Previous research found that incentive factors are thought to be a significant contributor in contributing to behavior formation [18]. The hope is that with the formation of behavior, especially the purchase of environmentally friendly products through tax incentive interventions, the growth in the use of environmentally friendly products will increase [19].

C. Environmental Care and Purchasing Eco-friendly products

Concern for environmental preservation is a universal value that is of widespread concern to many people [11], where the more they realize that environmental care is something important to reduce the rate of damage, they will tend to take preventive measures [3], and one of them is to do purchasing environmentally friendly products [2]. Even though it is still considered mysterious, the purchasing eco-friendly products can at least be predicted by various factors,

one of which is concern for environmental responsibility, so the hypothesis in this study is **H1: Environmental care has a positive effect on purchasing eco-friendly products**

D. Moral Obligation and Purchasing Eco-friendly products

Moral obligation is the feelings and alignments of individuals when faced with certain ethical situations [20]. The principle of being environmentally friendly is considered right and must be done because ignoring it is wrong, thus encouraging the behavior to contribute to environmental conservation efforts. By buying environmentally friendly products, consumers feel they have released their obligations and are responsible for the environment [21]. Based on the explanation above, the hypothesis of this study is **H2: Moral obligation has a positive effect on purchasing eco-friendly products**

E. Perceived Personal Inconvenience and Purchasing Eco-friendly Products

Perceived personal inconvenience is a person's perception of discomfort when purchasing eco-friendly products. These perceptions can be either more effort, a higher price to pay, or wasted time [15]. High product prices, insufficient knowledge and perceived personal inconvenience are factors that support individual reluctance to buy environmentally friendly products [23], so the hypothesis of this study is **H3: Perceived personal inconvenience affects the purchasing eco-friendly products.**

F. Self Identity and Purchasing Eco-friendly Products

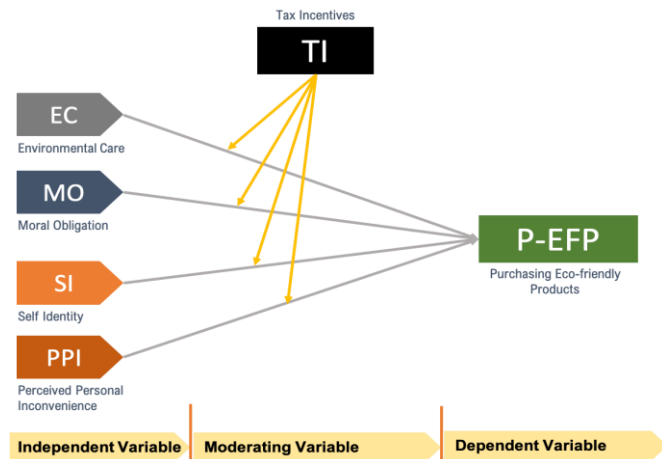
Self-identity is how individuals perceive themselves. In the context of this research, the self-identity in question is how individuals perceive themselves to be in favour of the environment as a form of special attention and feel attached to environmentally friendly behavior [11]. Purchasing eco-friendly products is also considered as one of the contributors to user satisfaction [22]. With the emergence of this satisfaction, users will then expand the purchasing eco-friendly products, so the hypothesis in this study is **H4: Self-identity has a positive effect on purchasing eco-friendly products**

G. Environmental Care, Moral Obligation, Perceived Personal Inconvenience, Self Identity, Tax Incentives and Purchasing Eco-friendly Products

Based on various previous studies conducted on factors that are suspected and proven to determine the purchasing eco-friendly products, it can be concluded that the internal control factors in the form of concern, moral obligation, self-identity, and limitations created by individual perceptions [11] are the factors that dominant in determining the purchasing eco-friendly products. Considering that all these internal factors can be influenced by various external conditions [3], such as promotional factors [4], ease of access [23], social influence [24], various notes and findings in previous research concerning the high price of environmentally friendly products compared to those that are not environmentally friendly, researchers pay attention to further research and try to include

the tax incentive factor as a moderating factor. With the tax incentive as a moderator, it is expected that it will become a variable that strengthens the antecedent variable on purchasing eco-friendly products. So that the hypothesis in this study is **H5: Tax incentives will moderate the influence between environmental care, moral obligation, self-identity, perceived personal inconvenience on purchasing eco-friendly products.**

Overall the hypothesis development can figure in proposed models in this research as follows:



III. METHODOLOGY

A. Research Subject

The subjects in this study were users of environmentally friendly products in the city of Yogyakarta as the population. While the sample using purposive sampling method. Purposive sampling is used in non-random sample selection with the criteria of using environmentally friendly products at least 3 product items from all types of goods consumed during 1 month.

B. Data Collection

Data was collected through a survey using a questionnaire distributed to respondents using google form. The research instrument was adapted from research [11] totalling 16 questions. Meanwhile, the tax incentive variable was added by researchers in this study with 3 questions. The total questions in the questionnaire became 19 items, and all of them were measured using a Likert scale with intervals of 1-5, with a value of 1 for the statement strongly disagree and a value of 5 for the statement strongly agree.

C. Data Processing

The validity test uses the Pearson product moment method, while reliability uses the Cronbach's Alpha technique. It is said to be reliable if the Cronbach alpha value is greater (>) than 0.60. In this study using SPSS software that has been added with PROCESS V3.5 from Hayes [25] by using multiple linear regression analysis with interactive test (Moderating Regression Analysis).

IV. DISCUSSION

A. Research Findings

1) The Influence of Environmental Care on Purchasing Eco-friendly Products with Tax Incentives as a Moderating Variable

TABLE I. DATA ANALYSIS RESULT FOR RESEARCH MODEL 1

	coeff	se	T	p	LLCI	ULCI
constant	5.2691	.1721	30.6078	.0000	4.9287	5.6095
SUMEC	-.1475	.1074	-1.3739	.1717	-.3598	.0648
SUMTI	.2097	.0828	2.5340	.0124	.0461	.3734
Int_1	.0805	.0517	2.5340	.1212	-.0216	.1827

From the table above, it can be seen that the interaction effect of the environmental care variable with the tax incentive moderator variable in the probability (p) column is $0.1212 > 0.05$, thus it shows an insignificant interaction effect. These results indicate that in equation 1, the tax incentive variable is not a moderating variable which is proven to be able to strengthen or weaken the influence of environmental care as an independent variable with the purchasing eco-friendly products as the dependent variable.

The table also shows that environmental care also has no effect on purchasing eco-friendly products, seen from the p-number for this variable is 0.1717, which is greater than 0.05. However, we can also see that there is an influence of the tax incentive moderator variable on the purchasing eco-friendly products, it can be seen from the p value of this variable which is 0.0124 which is smaller than 0.05. Furthermore, the output that shows the overall results in the form of a model summary from the PROCESS v3.5 data processing is as follows:

TABLE II. MODEL SUMMARY 1

R	R2	MSE	F	df1	df2	p
.2965	.0879	4.2312	4.4653	3.0000	139.00	.0050

It can be seen from the R^2 number shows that the number is very small, only 8.79% which indicates that the model with the tax incentive interaction effect as a moderating variable has very weak predictive power, because it turns out that there are still too many variables that influence purchasing eco-friendly products behavior. From the results of these outputs, it can be concluded that

H1: Environmental care has a positive effect on purchasing eco-friendly products **is not supported**

H5a: Tax incentives moderate the influence between environmental care and purchasing eco-friendly products **is not supported.**

2) The Effect of Moral Obligation on Purchasing Eco-friendly Products with Tax Incentives as a Moderating Variable

TABLE III. DATA ANALYSIS RESULT FOR RESEARCH MODEL 2

	coeff	se	T	p	LLCI	ULCI
constant	5.2772	.1742	30.2929	.0000	4.9327	5.6216

SUMMO	-.0788	.0246	-3.2098	.0016	-.1274	-.0303
SUMTI	.3118	.0812	3.8401	.0002	.1513	.4723
Int_1	.0006	.0106	.0577	.9540	-.0203	.0215

From the table above, it can be seen that the interaction effect of the moral obligation variable with the tax incentive moderator variable in the probability (p) column is 0.9540 > 0.05, so it shows an insignificant interaction effect. These results indicate that in equation 2, the tax incentive variable is not a moderating variable which is proven to be able to strengthen or weaken the influence of moral obligation as an independent variable with purchasing eco-friendly products as the dependent variable.

However, in the table, it can be seen that the moral obligation variable has a significant p value for the purchasing eco-friendly products, it can be seen from the p-number for this variable which is 0.0016 which is smaller than 0.05, however, the coefficient value in the equation is negative. In addition, it is also seen that there is the influence of the tax incentive moderator variable on the purchasing eco-friendly products, it can be seen from the p value of this variable which is 0.0002 which is smaller than 0.05. Furthermore, the output that shows the overall results in the form of a model summary from the PROCESS v3.5 data processing is as follows:

TABLE IV. MODEL SUMMARY 2

R	R2	MSE	F	df1	df2	p
.3541	.1254	4.0572	6.6432	3.0000	139.0000	.0003

It can be seen from the R2 number shows that the number is very small, only 12.54% which indicates that the model with the tax incentive interaction effect as a moderating variable is weak in its predictive power, because there are still too many variables that influence the purchasing eco-friendly products. From the results of these outputs, it can be concluded that

H2: Moral obligation has a positive effect on purchasing eco-friendly products is **not supported** because it turns out that the direction of the influence is negative.

H5b: Tax incentives moderate the influence between moral obligation and purchasing eco-friendly products is **not supported**.

3) The Perceived Personal Inconvenience on Purchasing Eco-friendly Products with Tax Incentives as a Moderating variable

TABLE 5 DATA ANALYSIS RESULT FOR RESEARCH MODEL 3

	coeff	se	T	p	LLCI	ULCI
constant	5.2544	.1465	35.8540	.0000	4.9646	constant
SUMPPI	-.6368	.0842	-7.5593	.0000	-.8034	SUMKI
SUMTI	.1590	.0695	2.2881	.0236	.0216	SUMIP
Int_1	-.0364	.0364	-1.0009	.3186	-.1084	Int_1

From the table above, it can be seen that the interaction effect of the perceived personal inconvenience variable with the tax incentive moderator variable in the probability (p) column is 0.3186 > 0.05, so it shows an insignificant interaction effect. These results indicate that in equation 3, the tax incentive variable is not a moderating variable which is

proven to be able to strengthen or weaken the influence of perceived personal inconvenience as an independent variable with purchasing eco-friendly products as the dependent variable.

However, in the table, it can be seen that perceived personal inconvenience has a significant p-value for purchasing eco-friendly products, seen from the p-number for this variable which is 0.0000 which is smaller than 0.05. In addition, it is also seen that there is an influence of the tax incentive moderator variable on the purchasing eco-friendly products, it can be seen from the p value of this variable which is 0.0236 which is smaller than 0.05. Furthermore, the output that shows the overall results in the form of a model summary from the PROCESS v3.5 data processing is as follows:

TABLE VI. MODEL SUMMARY 3

R	R2	MSE	F	df1	df2	p
.5981	.3577	2.9794	25.8081	3.0000	139.0000	.0000

It can be seen from the R2 figure that the figure is relatively small, only 35.77% even though it has shown better predictive power in the model compared to the 2 previous models. In addition, it is also seen that the perceived personal inconvenience variable directly has a negative effect on the purchasing eco-friendly products. From the results of these outputs, it can be concluded that

H3: Perceived personal inconvenience has a negative effect on purchasing eco-friendly products is **supported**

H5c: Tax incentives moderate the influence between perceived personal inconvenience and purchasing eco-friendly products is **not supported**

4) The Effect of Self-Identity on Purchasing Eco-friendly Products with Tax Incentives as a Moderating Variable

TABLE VII. DATA ANALYSIS RESULT FOR RESEARCH MODEL 4

	coeff	se	T	p	LLCI	ULCI
constant	5.2747	.1723	30.6194	.0000	4.9341	5.6153
SUMSI	-.3841	.1703	-2.2556	.0257	-.7209	-.0474
SUMTI	.2585	.0812	3.1832	.0018	.0979	.4190
Int_1	.0194	.0686	.2833	.7774	-.1161	.1550

From the table above, it can be seen that the interaction effect of the self-identity variable with the tax incentive moderator variable in the probability (p) column is 0.7774 > 0.05, thus it shows an insignificant interaction effect. These results indicate that in equation 4, the tax incentive variable is not a moderating variable that is proven to be able to strengthen or weaken the influence of self-identity as an independent variable with purchasing eco-friendly products as the dependent variable.

However, in the table, it can be seen that the self-identity variable has a significant p value for the purchasing eco-friendly products, it can be seen from the p-number for this variable which is 0.0257 which is smaller than 0.05, however, the coefficient value in the equation is negative. In addition, it is also seen that there is the influence of the tax incentive moderator variable on the purchasing eco-friendly products, it

can be seen from the p value of this variable which is 0.0018 which is smaller than 0.05. Furthermore, the output that shows the overall results in the form of a model summary from the PROCESS v3.5 data processing is as follows:

TABLE VIII. MODEL SUMMARY 4

R	R2	MSE	F	df1	df2	p
.3081	.0950	4.1985	4.8610	3.0000	139.0000	.0030

It can be seen from the number R2 shows that the number is very small, only 9.5% which shows that the model with the tax incentive interaction effect as a moderating variable has very weak predictive power, because there are still too many variables that influence the purchasing eco-friendly products. From the results of this output, it can be concluded that:

H4: Self-identity has a positive effect on purchasing eco-friendly products is **not supported** because it turns out that the direction of the influence is negative.

H5d: Tax incentives moderate the influence between self-identity and purchasing eco-friendly products is **not supported**.

V. CONCLUSION

From the overall results of the analysis carried out for the four research models, in general it can be found that the interaction effect of the tax incentive variable in all equations shows an insignificant probability figure, thus it can be concluded that the tax incentive is not a variable which capable of moderating the four independent variables in this study, namely environmental care, moral obligation, perceived personal inconvenience and self-identity on the dependent variable, purchasing eco-friendly products. This happens because it is possible for consumers of eco-friendly products to have sufficient information that until now there has not been a single tax policy which indicates that it will be possible to apply tax incentives to purchasing eco-friendly products, and this situation makes them have a quite skeptical point of view about the existence of tax incentives.

However, it can also be concluded that in the four research models, it can be seen that tax incentives have an influence on the dependent variable. This also implies that it is very possible that tax incentives can become an independent variable that can influence the purchasing eco-friendly products. These findings then inspired researchers to explore more about this phenomenon.

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REFERENCES

- [1] B. Seno, Pasar Global Produk Ramah Lingkungan, *Suara Karya*, 2014.
- [2] E. Muslim and D. R. Indriani, Analisis Pengaruh Eco-Label terhadap

- Kesadaran Konsumen untuk Membeli Green Product, *J. Manaj. Teknol.*, vol. 13, no. 1, 2014, pp. 86–100.
- [3] K. Peattie, Delivered by Publishing Technology to : Manchester Metropolitan University Towards Sustainability: The Third Age of Green Marketing Delivered by Publishing Technology to : Manchester Metropolitan University, *Society*, 2001, pp. 129–146.
- [4] I. Santoso and R. Fitriani, Green Packaging, Green Product, Green Advertising, Persepsi, dan Minat Beli Konsumen, *J. Ilmu Kel. dan Konsum.*, vol. 9, no. 2, 2016, pp. 147–158.
- [5] C. P. Patel and P. K. Chugan, The influence of consumer perception towards green advertising on green purchase intention, *Int. J. Entrep. Bus. Environ. Perspect.*, vol. 4, no. 3, 2014, pp. 1865–1873.
- [6] S.-I. Wu and Y.-J. Chen, The Impact of Green Marketing and Perceived Innovation on Purchase Intention for Green Products, *Int. J. Mark. Stud.*, vol. 6, no. 5, 2014, pp. 81–100.
- [7] Y. S. Chen and C. H. Chang, Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust, *Manag. Decis.*, vol. 50, no. 3, 2012, pp. 502–520.
- [8] P. Martínez, Customer loyalty: Exploring its antecedents from a green marketing perspective, *Int. J. Contemp. Hosp. Manag.*, vol. 27, no. 5, 2015, pp. 896–917.
- [9] I. Ajzen, The Theory of Planned Behavior Organizational Behavior and Human Decision Processes, *Organ. Behav. Hum. Decis. Process.*, vol. 50, no. 2, 1991, pp. 179–211.
- [10] R. M. Mancha and C. Y. Yoder, Cultural antecedents of green behavioral intent: An environmental theory of planned behavior, *J. Environ. Psychol.*, vol. 43, 2015, pp. 145–154.
- [11] C. Barbarossa and P. De Pelsmacker, Positive and Negative Antecedents of Purchasing Eco-friendly Products: A Comparison Between Green and Non-green Consumers, *J. Bus. Ethics*, vol. 134, no. 2, 2016, pp. 229–247.
- [12] C. Gramkow and A. Anger-Kraavi, Could fiscal policies induce green innovation in developing countries? The case of Brazilian manufacturing sectors, *Clim. Policy*, vol. 18, no. 2, 2018, pp. 246–257.
- [13] I. Ajzen, The theory of planned behavior: Reactions and reflections, *Psychol. Heal.*, vol. 26, no. 9, 2011, pp. 1113–1127.
- [14] N. Adnan, S. M. Nordin, and I. Rahman, Adoption of PHEV/EV in Malaysia: A critical review on predicting consumer behavior, *Renew. Sustain. Energy Rev.*, vol. 72, no. November 2016, 2017, pp. 849–862.
- [15] S. Gupta and D. T. Ogden, To buy or not to buy? A social dilemma perspective on green buying, *J. Consum. Mark.*, vol. 26, no. 6, 2009, pp. 378–393.
- [16] D. M. Messick and et al, Individual adaptations and structural change as solutions to social dilemmas, *J. Pers. Soc. Psychol.*, vol. 44, no. 2, 1983, pp. 294–309.
- [17] P. R. Indonesia, *Peraturan Pemerintah Republik Indonesia No. 46 Tahun 2017 - Instrumen Ekonomi Lingkungan Hidup*. 2017.
- [18] A. Kirakozian, One Without the Other? Behavioral and Incentive Policies for Household Waste Management, *J. Econ. Surv.*, vol. 30, no. 3, 2016, pp. 526–551.
- [19] I. Monasterolo and M. Raberto, The EIRIN Flow-of-funds Behavioral Model of Green Fiscal Policies and Green Sovereign Bonds, *Ecol.*

- Econ.*, vol. 144, no. July 2017, 2018, pp. 228–243.
- [20] R. Haines, M. D. Street, and D. Haines, The influence of perceived importance of an ethical issue on moral judgment, moral obligation, and moral intent, *J. Bus. Ethics*, vol. 81, no. 2, 2008, pp. 387–399.
- [21] J. Shang, J. Peloza, and K. White, Good and Guilt Free: The Role of Self-Accountability in Influencing Preferences for Products with Ethical Attributes, *J. Mark.*, vol. 77, no. January, 2012, pp. 1–52.
- [22] C. B. Bhattacharya and S. Sankar, Consumer-company identification: A framework for understanding consumers' relationships with companies., *J. Mark.*, vol. 67, 2003, pp. 76–88.
- [23] M. R. Gleim, J. S. Smith, D. Andrews, and J. J. Cronin, Against the Green: A Multi-method Examination of the Barriers to Green Consumption, *J. Retail.*, vol. 89, no. 1, 2013, pp. 44–61.
- [24] A. Khare, Antecedents to green buying behavior: A study on consumers in an emerging economy, *Mark. Intell. Plan.*, vol. 33, no. 3, 2015, pp. 309–329.
- [25] A. F. Hayes, *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York: The Guilford Press, 2013.