

## **The Relationship between Learning Culture and Learning Agility in Leaders**

Hesikia Adenina Radiksa Ismayajati<sup>1</sup>, Lucia Trisni Widhianingtanti<sup>2</sup>

<sup>1</sup>*Faculty of Psychology, Soegijapranata Chatolic University Semarang, Indonesia*

<sup>2</sup>*Faculty of Psychology, Soegijapranata Chatolic University Semarang, Indonesia*

---

**Abstract:** This research was conducted to examine the relationship between learning culture and learning agility. The study utilized a quantitative method, and 128 respondents were obtained from various organizations in Semarang. The analysis method used was Spearman's correlation, which is employed to measure the relationship between two ordinal or nominal variables. The measurement tools used were the Learning Agility Questionnaire with 17 items ( $\alpha = 0.917$ ) and Organizational Learning Culture (OLC) with 8 items ( $\alpha = 0.842$ ). The results of the study showed a significant relationship between learning culture and learning agility ( $p = 0.637$ ,  $p > 0.005$ ). Further research should consider using a larger sample size to draw more conclusive findings regarding the broader population of companies in Indonesia.

**Keywords:** Learning agility, learning culture

---

### **1. Introduction**

The COVID-19 pandemic has brought significant changes to various aspects of life, including its impact on the industrial sector (Ma'rifah, 2020). According to Ma'rifah (2020), to confront these changes, individuals are required to be adaptive. This situation has given rise to a new culture often referred to as the "new normal." One noticeable behavioral change is the increased use of technology to minimize direct contact or face-to-face interactions, allowing individuals to work from anywhere without the need for physical meetings (Muhyiddin, 2020). In this situation, companies that are unable to respond to these changes may encounter new problems, and such changes can become traps as companies fail to align their vision, competencies, and culture, thus hindering the development of new innovations (Febrianty et al., 2021). According to Gravett (Gravett & Caldwell, 2016), as individuals increasingly interact with each other and become more intelligent, companies require employees who can manage change in order to grow and sustain themselves in a rapidly changing world. Failure to address these problems and traps can lead to the downfall or bankruptcy of companies, as stated by the Chairman of the Indonesian Chamber of Commerce and Industry (KadIn), with approximately 52% of companies experiencing similar situations (Advenia E., 2022).

These rapid changes necessitate organizations and companies to strive for new ideas (Weresa, 2019) and take further actions to adapt. One of the necessary actions is to have leaders who can consider risks in decision-making, especially when facing changes, or leaders who are agile and can positively impact the company (Naufaldi & Sofia, 2021). An agile leader is capable of transforming challenges into opportunities (Muhyiddin, 2020). Moreover, leaders are required to be optimistic and recognize the advantages possessed by the organization or company they lead, in order to face various challenges (Azahari et al., 2021). In this situation, leaders who can respond, realize, feel, and adapt to changes are essential (Bakti, 2022). To achieve the main goals of a company or organization, various actions supporting these goals need to be taken, and one of them is preparing human resources, particularly agile leaders who can positively impact the company. An agile leader is one who can transform their perspective on challenges into opportunities (Muhyiddin, 2020). Creating agile leadership in the future poses a challenge for companies and organizations themselves, as leaders need to possess learning agility skills (Jatmika & Puspitasari, 2019). In today's era where technological advancements are crucial, companies also require individuals with learning agility skills to effectively face changes (Miles, 2013).

According to Mitchinson and Robert (2012), learning agility refers to a mindset and ability that allows individuals to develop, grow, and utilize new strategies to overcome increasingly complex problems within organizations. Learning agility in leaders is considered important because through it, leaders perceive that their experiences will yield valuable lessons. Thus, through these experiences, leaders have the opportunity to develop (Dai et al., 2013). Leaders perceive their learning agility as the ability to react to failure and adopt a defensive approach. They are also capable of calmly addressing issues, admitting mistakes, analyzing them, and making improvements. Leaders with learning agility can drive company growth, supported by research indicating that organizations with a workforce exhibiting learning agility can generate 25% higher profits than competitors lacking such a workforce (Dai et al., 2013). DeRue's research (2012) demonstrates that factors influencing learning agility include individual and situational factors. The individual factors consist of learning

orientation, cognitive ability, and openness to experience. Meanwhile, situational factors consist of the characteristics of experience and learning culture. To produce individuals with learning agility, employees within the company need to have good work engagement by demonstrating their learning culture intensively within a specific period of time (Saputra, Kuncoro, Sasmoko, 2021). To enhance higher learning agility, a strong learning culture is required because individuals feel supported and encouraged, enabling them to continuously improve their enthusiasm for learning and enhance their skills (Tripathi & Kalia, 2022).

Wheeler (2002) explains that a learning culture is an embedded process for creating value. Saputra (2018) states that a learning culture is an element of learning agility that can support and facilitate employees in learning, disseminating, and sharing knowledge for organizational or company purposes. A learning culture is a pattern in which individuals, teams, and organizations are formed for learning (Gill, 2013). Rebelo & Gomes (2011) also define a learning culture as a type of organizational culture that aims to promote and support learning for all individuals within the organization or company to achieve organizational performance. A learning culture is one type of culture that integrates organizational learning by targeting organizational improvement through information acquisition support, promotion, and various learning activities (Bates & Khasawneh, 2005). A learning culture is possessed based on clear goals, a willingness to share among individuals, which ultimately leads to learning outcomes (Marsick & Watkins, 2003). A learning culture is one type of organizational culture that aims to support individuals in learning, and learning culture has a relationship in the form of situational factors that influence learning agility (Derue et al., 2012).

Learning culture provides many benefits and is associated with financial and non-financial outcomes. Additionally, a learning culture enables individuals to develop themselves more quickly and effectively (Goh & Ryan, 2008). Saputra (2018) argues that another benefit of maintaining a learning culture is that it makes employees agile in learning about themselves, others, and even new ideas. Furthermore, a learning culture serves as a driver for individual and collaborative learning within the organization. By developing learning agility, individuals are encouraged to take responsibility for risks, build a willingness to learn from mistakes, and share knowledge (Saputra, Sasanti, 2021).

However, in Indonesia, there are still many employees who lack adequate skills and abilities to meet the rapidly evolving business needs. Therefore, according to Jusuf Irianto, Professor of Human Resource Management at the Department of Public Administration, Faculty of Social and Political Sciences, Airlangga University, stated in an article that studying how a strong learning culture and learning agility can help companies improve the capabilities and skills of their workforce, enabling them to compete in an increasingly competitive global market. Many individuals still have limited understanding of how learning culture and learning agility are implemented and managed within an organization, which can hinder their ability to adapt to changes.

In an era of rapid and unpredictable change, it is crucial for companies to have leaders who possess learning agility skills and a strong learning culture to adapt to change and maintain a competitive advantage in an increasingly competitive market. In this context, research on the relationship between learning agility and learning culture becomes crucial to assist companies in facing complex and dynamic business challenges and competition. Therefore, this research aims to examine the relationship between learning culture and learning agility.

## **2. Literature Review and Hypotheses**

### **2.1. Learning Agility**

Learning agility, as described by Lombardo & Eichinger (2000), is the willingness and ability to learn new competencies in situations that are first-time, different, and difficult. According to Gravett & Caldwell (2016), learning agility is the ability to adapt and the willingness to face the unknown. Learning agility can also be defined as the ability to learn the right lessons from experiences and apply them to new situations, as well as the willingness to seek new challenges for personal growth, reflect and evaluate experiences, and draw practical conclusions (De Meuse et al., 2010). "The aspects of learning agility are people agility, result agility, mental agility, and change agility (Gravett & Caldwell, 2016). While the factors influencing learning agility are oneself and the environment (Derue et al., 2012). The explanation above represents factors that can enhance learning agility in individuals. Based on the factors influencing learning agility, individuals within a company need to have a strong work engagement by demonstrating an intensive individual learning culture within a certain period of time (Saputra, Kuncoro, Sasmoko, 2021). The ability to learn and adapt quickly and effectively (learning agility) can be influenced by a strong learning culture. Learning culture is also one type of organizational culture that aims to support individuals in continuous learning, thus learning culture is related to learning agility as one form of situational factor influencing learning agility (Derue et al., 2012)."

Based on this description, the following hypotheses can be proposed:

H<sub>1</sub>: There is a positive relationship between learning agility and learning culture.

## **2.2. Learning Culture**

The definition of learning culture according to Rebelo & Gomes (2011) is a shared underlying assumption that a group learns when solving both external and internal problems that work well enough and will be taught to new members as a way to understand, think, and feel connected to those issues. The learning culture proposed by Broecher (2019) is a supporter of learning, individual transformation, driver for teams to learn and proactively reflect on work, which can influence changes in strategy and processes, as well as the willingness to learn and improve oneself towards making key decisions and enhancing the broader organization. According to Rebelo & Gomes (2011), there are two dimensions of learning culture is External Adaptability and Internal Integration,

## **3. Research Methods**

### **3.1. Population and Sample**

This study is a quantitative research by using online questionnaire for gathering the data. Additionally, the questionnaires were also distributed through social media applications. Participants were provided with informed consent during the research process. The sample was taken from leaders working in various industries in Semarang using accidental sampling technique, where the researcher determines the sample by chance. If the identified subjects are suitable for the study, they are included as a data source for the research (Husaini, 2020). A total of 125 samples were successfully collected from various companies in Semarang. The respondents' profiles are dominated by male (68%), possessing a bachelor and master (40%), and more than 5 years for length of work experience as a leader (42,4%).

### **3.2. Measurement and Procedure**

The learning agility scale is a 5-point Likert scale with 1 meaning "Never," 2 meaning "Rarely," 3 meaning "Sometimes," 4 meaning "Often," and 5 meaning "Always." The measurement tool for learning agility uses a learning agility questionnaire adapted by Selvia Wardhani et al. (2022) ( $\alpha = 0.844$ ) based on the scale developed by Lombardo and Eichinger (2000). The measurement tool for learning culture is adapted by Saputra et al (2018) based on the Organizational Learning Culture (OLC) scale by Rebelo & Gomes (2011). The learning culture scale is a 5-point Likert scale with 1 meaning "Never," 2 meaning "Rarely," 3 meaning "Sometimes," 4 meaning "Often," and 5 meaning "Always". The scale consists of two dimensions, namely Internal Integration ( $\alpha = 0.784$ ) and External Adaptation ( $\alpha = 0.823$ ), with a total of 8 items.

### **3.3. Data Analysis Techniques**

The analysis method used is Spearman's rho correlation technique because the Spearman's rho analysis method is a non-parametric method used to measure the relationship between two ordinal or nominal variables. This method is very useful when the data does not meet the assumptions of normality or normal distribution.

## **4. Result and Discussion**

### **4.1. Results of Validity and Reliability Analysis of the Measurement Tool**

The measurement analysis was conducted using Spearman's rho correlation technique with the assistance of SPSS for Windows version 25.0. The validity of each item was assessed based on the corrected item-total correlation values compared to the  $r$  table = 0.170 for 125 respondents. If an item has an observed correlation ( $r$ ) value < 0.170, it is considered invalid or dropped. Meanwhile, the reliability of the measurement tool was analyzed using Cronbach's Alpha coefficient, with a coefficient close to 1.00 indicating high reliability. The results of the validity and reliability analysis of the measurement tool are as follows Please provide the results of the validity and reliability analysis. In the Learning Agility Scale, the total number of items is 17. After the analysis, it was found that one item, namely item 13 in the mental agility aspect, was dropped.

The Learning Agility Scale in the final analysis showed a reliability coefficient of 0.917, indicating high reliability. In the learning culture scale, the total number of items is 8. After the analysis, no items were dropped, and the measurement tool has a reliability coefficient of 0.842, indicating high reliability.

Table 1: Validity and Reability

Dimension		Cronbach's Alpha
<b>Learning Agility</b>		
Change Agility	CA1	0,915
	CA2	0,910
	CA3	0,913
Mental Agility	MA1	0,913
	MA2	0,910
	MA3	0,910
People Agility	PA1	0,916
	PA2	0,910
	PA3	0,914
	PA4	0,910
	PA5	0,918
Result Agility	RA1	0,910
	RA2	0,919
	RA3	0,909
		0,910
		0,909
<b>Learning Culture</b>		
Internal Adaptability	EX1	0,819
	EX2	0,816
	EX3	0,823
	EX4	0,825
Internal Integration,	IN1	0,853
	IN2	0,825
	IN3	0,815
	IN4	0,813

#### 4.2. Hypothesis Testing Results

The researcher conducted a Spearman correlation test to examine the relationship between learning agility and learning culture. The analysis of the correlation between learning culture and learning agility yielded a correlation coefficient of  $r = 0.672$  with a significance level of  $0.000 < 0.01$ . Therefore, it can be concluded that learning culture is positively and significantly associated with learning agility. This finding is consistent with previous research indicating that learning culture has a significant positive impact on learning agility (Tripathi & Kalia, 2022). The effective contribution of learning culture to learning agility is 0.406 or 40.6%. Hence, the hypothesis "There is a positive relationship between learning culture and learning agility in leaders" is accepted. The researcher also examined the relationship between the aspects of learning culture and learning agility. Based on the analysis results, it can be seen that learning culture is positively and significantly related to each aspect of learning agility. The analysis results can be seen in the table 2.

Table 2: The analysis results between learning culture and the aspects of learning agility

	Learning Culture
<i>Mental Agility</i>	$r = 0,641$ sig. 0,000
<i>People Agility</i>	$r = 0,556$ sig. 0,000
<i>Change Agility</i>	$r = 0,496$ sig. 0,000
<i>Result Agility</i>	$r = 0,589$ sig. 0,000

#### 4.1. Discussion

Based on the analysis using Spearman correlation, where the correlation coefficient ( $r_{xy}$ ) is 0.637 and the significance value is  $0.000 < 0.01$ , it indicates a positive relationship between learning culture and learning agility, thus accepting the hypothesis. The results indicate that the higher the learning culture, the higher the learning agility, and vice versa. Learning culture contributes 40.6% to learning agility in this study, which

means that there are other factors accounting for 59.4% of the variation in leader's learning agility. Other factors that may influence learning agility include individual experiences and self-fulfilling prophecies.

The hypothesis in this study is supported by previous research conducted by Saputra et al. (2018). Their study on learning agility and learning culture among 67 employees also found a positive influence between learning culture and learning agility. This is further supported by the research conducted by Tripathi and Kalia (2022), which states that learning culture has a significant positive impact on learning agility. Learning culture stimulates, supports, and facilitates individuals to learn, while also enabling knowledge sharing for organizational purposes through internal integration and external adaptation. Learning culture enhances learning agility by creating an environment where individuals feel supported and encouraged to continuously learn and improve their skills. Through learning culture, individuals become agile learners, not only about themselves but also about others.

These findings are consistent with the research conducted by Tripathi et al. (2020), which also found a significant positive relationship between learning culture and learning agility. Their study suggests that learning culture positively influences individual learning agility by motivating and facilitating individuals to learn continuously and disseminate knowledge to achieve organizational goals. Learning culture also enhances individuals' agility in learning and generates innovative ideas.

Categorical analysis was performed to determine the levels of learning culture and learning agility among the respondents. For learning agility, 12 respondents were categorized as low, 89 as medium, and 24 as high. For learning culture, 18 respondents were categorized as low, 86 as medium, and 21 as high. The majority of the respondents fell into the medium category for both learning culture and learning agility, indicating the need for further attention to enhance the learning agility and learning culture of individuals. The analysis shows that there is a positive relationship between the two variables. A high level of learning culture is supported by its aspects and can influence learning agility.

This is supported by the research conducted by Saputra et al. (2018), which found that higher learning culture leads to higher learning agility. The impact of learning culture is manifested in individuals feeling supported, stimulated, and facilitated to learn, share, and disseminate knowledge among individuals, which enhances their learning agility. Individuals with a learning culture are more agile in learning about themselves, others, and generating innovative ideas.

The analysis of the relationship between learning agility and learning culture aspects was conducted using Spearman's rho. The mental agility aspect and learning culture have a correlation coefficient of  $r = 0.589$  and significance of 0.000, indicating a positive and significant relationship. Individuals who develop a learning culture are exposed to various diversities, allowing them to think openly and consider multiple perspectives (mental agility). The change agility aspect and learning culture have a correlation coefficient of  $r = 0.496$  and significance of 0.000, indicating a positive and significant relationship. This relationship is characterized by an individual's perseverance in facing every change when they have a learning culture.

The analysis between the result agility aspect and learning culture shows a correlation coefficient of  $r = 0.556$  and a significance of 0.000, indicating a positive and significant relationship between the result agility aspect and learning culture. This means that individuals who have a desire to improve what they have done can influence the outcomes they achieve.

On the other hand, the analysis of the people agility aspect and learning culture reveals a correlation coefficient of  $r = 0.641$  and a significance of 0.000, indicating a positive and significant relationship between the people agility aspect and learning culture. This is demonstrated by the fact that individuals with a learning culture are more willing to help others or their peers, ultimately fostering mutual growth in thinking and a willingness to explore new things.

## 5. Conclusion

The research aims to examine the relationship between learning agility and learning culture among leaders in Semarang. Based on the conducted research, it can be concluded that the data processing results in this study indicate that the hypothesis "a positive relationship between learning culture and learning agility among leaders working in Semarang" is accepted. This is because learning agility can be well predicted by learning culture through internal integration and external adaptation processes (Saputra et al., 2018). The weaknesses of this study include a limited sample size, limited references to further deepen the research, and the study only examined a few companies. For future research, it is recommended to use a larger sample size to draw more conclusive findings regarding a broader population and various companies. Additionally, it is suggested to include additional variables in future studies that have not been investigated in this research.

### Reference

- [1] Azahari, H., Fantini, E., Bisnis, A., & Negara, A. (2021). Pengaruh Gaya Kepemimpinan Terhadap Kinerja Karyawan pada Perusahaan Fintech Pendanaan Xyz di Era Vuca Prosiding Seminar STIAMI. *Prosiding Seminar STIAMI (2021)* 8(2) 115-123, 8(2), 115–123.
- [2] Bakti, R. (2022). Implementasi Peran Pemimpin Dan Human Resources Dalam Organisasi Di Masa VUCA. *Jurnal Keuangan Dan Bisnis*, 1(1). <https://journal.stiegici.ac.id/index.php/jurnal-gici/article/view/17%0Ahttps://journal.stiegici.ac.id/index.php/jurnal-gici/article/download/17/33>
- [3] Bates, R., & Khasawneh, S. (2005). Organizational learning culture, learning transfer climate and perceived innovation in Jordanian organizations. *International Journal of Training and Development*, 9(2), 96–109. <https://doi.org/10.1111/j.1468-2419.2005.00224.x>
- [4] Broeher, J. (2019). Creating Learning Spaces. *Creating Learning Spaces*, April. <https://doi.org/10.1515/9783839448878>
- [5] Dai, G., De Meuse, K. P., & Tang, K. Y. (2013). The role of learning agility in executive career success: The results of two field studies. *Journal of Managerial Issues*, 25(2), 108–131.
- [6] De Meuse, K. P., Dai, G., & Hallenbeck, G. S. (2010). Learning agility: A construct whose time has come. *Consulting Psychology Journal*, 62(2), 119–130. <https://doi.org/10.1037/a0019988>
- [7] Derue, D. S., Ashford, S. J., & Myers, C. G. (2012). Learning Agility: In Search of Conceptual Clarity and Theoretical Grounding. *Industrial and Organizational Psychology*, 5(3), 258–279. <https://doi.org/10.1111/j.1754-9434.2012.01444.x>
- [8] Febrianty, Abdurohlim, Siahaya, V., Taufiqurrahman, Arsawan, E., Kennedy, P., & Dewi, N. (2021). *NEW NORMAL ERA*.
- [9] Gill, S. (2013). Developing a Learning Culture in Nonprofit Organizations. In *Developing a Learning Culture in Nonprofit Organizations*. <https://doi.org/10.4135/9781452272030>
- [10] Goh, S. C., & Ryan, P. J. (2008). The organizational performance of learning companies: A longitudinal and competitor analysis using market and accounting financial data. *Learning Organization*, 15(3), 225–239. <https://doi.org/10.2208/09696470810868855>
- [11] Gravett, L. S., & Caldwell, S. A. (2016). Learning agility: The impact on recruitment and retention. In *Learning Agility: The Impact on Recruitment and Retention*. <https://doi.org/10.1057/978-1-137-59965-0>
- [12] Jatmika, D., & Puspitasari, K. (2019). Learning Agility Pada Karyawan Generasi Millennial Di Jakarta. *Jurnal Muara Ilmu Sosial, Humaniora, Dan Seni*, 3(1), 187. <https://doi.org/10.24912/jmishumsen.v3i1.3446>
- [13] Lombardo, M. M., & Eichinger, R. W. (2000). *Lombardo\_et\_al-2000-Humana\_Resource\_Management*. 39(4), 321–329.
- [14] Ma'rifah, D. (2020). Implementasi Work From Home: Kajian Tentang Dampak PMA'rifah, D. (2020). Implementasi Work From Home: Kajian Tentang Dampak Positif, Dampak Negatif Dan Produktivitas Pegawai. *Civil Service*, 14(2), 53–64. ositif, Dampak Negatif Dan Produktivitas Pegawai. *Civil Service*, 14(2), 53–64.
- [15] Marsick, V., & Warkins, K. E. (2003). Demonstrating the value of a Organizational Learning Culture. *Advances in Developing Human Resources*, 5(2), 132–151. <https://doi.org/10.1177/1523422303251341>
- [16] Miles, A. (2013). Agile learning: Living with the speed of change. *Development and Learning in Organisations*, 27(2), 20–22. <https://doi.org/10.1108/14777281311302058>
- [17] Mitchinson, A., & Morris, R. (2012). Learning about learning agility. *Academy of Management 2012 Annual Meeting, AOM 2012*, 1830–1835. <https://doi.org/10.5465/AMBPP.2012.288>
- [18] Muhyiddin. (2020). Covid-19, New Normal, dan Perencanaan Pembangunan di Indonesia. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, 4(2), 240–252. <https://doi.org/10.36574/jpp.v4i2.118>
- [19] Naufaldi, A., & Sofia, E. (2021). Analisis Pengaruh Pelatihan Pekerja Dan Ketangkasan Kepemimpinan Terhadap Kinerja Pekerja Di Era Vuca ( Studi Pada Pt Pertamina Geothermal Energy Area Ulubelu ). *Jurnal Sociaperti*, 1(2).
- [20] Rebelo, T., & Gomes, A. D. (2011). *The OLC Questionnaire*. 216–236. <https://doi.org/10.4018/978-1-60960-519-3.ch011>
- [21] Saputra, N., Abdinagoro, S. B., & Kuncoro, E. A. (2018). The mediating role of learning agility on the relationship between work engagement and learning culture. *Pertanika Journal of Social Sciences and Humanities*, 26(T), 117–130.
- [22] Saputra, N., Kuncoro, E., & Sasmoko. (2021). PENGARUH LEARNING CULTURE TERHADAP LEARNING AGILITY: APAKAH BERDAMPAK LANGSUNG ATAUKAH TIDAK? *Jurnal Mebis: Manajemen Dan Bisnis*, 6(1), 53–61.
- [23] Saputra, N., Sasanti, N., & Hindriari, R. (2021). *Sustainable Growth of Indonesia Palm Oil Companies:*

- Synchronizing Agility, Culture, and Engagement*. May. <https://doi.org/10.4108/eai.14-9-2020.2304375>
- [24] Selvia Wardhani, N., Sulastiana, M., & Ashriyana, R. (2022). Adaptasi Alat Ukur Learning Agility pada Karyawan untuk Meningkatkan Organizational Agility: Versi Bahasa Indonesia. *Psikologika: Jurnal Pemikiran Dan Penelitian Psikologi*, 27(2), 243–264. <https://doi.org/10.20885/psikologika.vol27.iss2.art4>
- [25] Tripathi, A., & Kalia, P. (2022). Examining the effects of supportive work environment and organisational learning culture on organisational performance in information technology companies: The mediating role of learning agility and organisational innovation. *Innovation: Organization and Management*, 00(00), 1–21. <https://doi.org/10.1080/14479338.2022.2116640>
- [26] Tripathi, A., Srivastava, R., & Sankaran, R. (2020). Role of learning agility and learning culture on turnover intention: an empirical study. *Industrial and Commercial Training*, 52(2), 105–120. <https://doi.org/10.1108/ICT-11-2019-0099>
- [27] Weresa, M. A. (2019). Technological competitiveness of the EU member states in the era of the fourth industrial revolution. *Economics and Business Review*, 5(3), 50–71. <https://doi.org/10.18559/ebr.2019.3.4>
- [28] Wheeler, B. C. (2002). NEBIC: A dynamic capabilities theory for assessing net-enablement. *Information Systems Research*, 13(2), 125–146. <https://doi.org/10.1287/isre.13.2.125.89>