



LEVEL OF KNOWLEDGE AND EXTENT OF IMPLEMENTATION OF PRESIDENTIAL LABOR CODE OF THE PHILIPPINES (DECREE 442) AT INTERNATIONAL SCHOOL OF ASIA AND THE PACIFIC

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ABSTRACT: *This study focuses on assessing the knowledge and awareness of International School of Asia and the Pacific (ISAP) employees regarding the Philippine Labor Code (Presidential Decree 442). A descriptive correlational research design was utilized to determine the level of knowledge and the extent of implementation of the Labor Code among the respondents. The findings reveal a considerable level of knowledge among the respondents, with none categorized as completely unaware. A significant majority of respondents also reported a positive perception of the implementation of the Labor Code in their workplace. The study further identified a moderate positive correlation between knowledge and assessment, indicating that better-informed employees have a more accurate evaluation of labor code compliance. These results underscore the importance of promoting labor code awareness and understanding among employees to enhance workplace compliance with labor regulations.*

Keywords: *Employee, Labor Code, Awareness, Knowledge, Human Resource Management, Implementation*

INTRODUCTION

The literature emphasizes the right to work as an essential human right and highlights the significance of legal regulations in labor relations, which impact a society's level of development and its economy. The International Labor Organization (ILO) plays a role in setting global labor standards, with the idea of international labor standards evolving from the Industrial Revolution of the nineteenth century.

In the Philippines, the Labor Code of the Philippines, implemented in 1974 by President Ferdinand Marcos, serves as the primary legislation governing employment. It provides comprehensive protection for workers' rights, welfare, and interests and outlines various types of employment, such



as regular, project, seasonal, fixed-term, casual, and probationary employment. The Labor Code also establishes minimum labor standards, including minimum wage rates, maximum working hours, and benefits like vacation pay and overtime compensation.

The Philippine Labor Code is favorable to labor, granting private employees protection against unjust termination, acknowledging the freedom to form labor unions, and allowing strikes within defined guidelines. The law has traditionally followed a pro-labor stance in ambiguous situations. To address the gaps in labor awareness, the study aims to assess the awareness of International School of Asia and the Pacific (ISAP) employees regarding the Philippine Labor Code (Presidential Decree 442). The research intends to identify if employees are knowledgeable about their labor rights and protections.

Potential solutions to address these gaps include conducting educational programs and workshops to increase awareness of labor rights among ISAP employees and collaborating with the Philippine Department of Labor and Employment to disseminate information about labor laws. Encouraging transparent labor practices and establishing mechanisms for reporting labor violations can contribute to a more supportive work environment.

RESEARCH METHODOLOGY

This study will utilize the descriptive correlational research design. As widely accepted, the descriptive method of research is a fact-finding study that involves adequate and accurate interpretation of findings. Relatively, the method is appropriate to this study since it aims to determine the level of knowledge of International School of Asia and the Pacific employees and the extent of implementation of Presidential Decree 442 or also known as Labor Code of the Philippines and further assess their level of correlation. We opted to use this kind of research design considering the desire to acquire first-hand data from respondents so as to formulate rational and sound conclusions and recommendations for the study.



Employees of the International School of Asia and the Pacific who were presently employed were the respondents of this study. Regular, casual, or contractual, and probationary employees' employment statuses, for example, were relatively significant in getting the sample since these categories determined the sample out of the entire population of employees. The researchers employed a simple random sampling technique to select the respondents of the study. Moreover, the sampling technique that was used to determine the sample size of the total population was the Slovin's formula. The total population of employees presently employed in ISAP was 191. We took respondents into the sample size as representatives of the total population of employees of ISAP. It was ideal for us to use this type of sampling technique because the findings that were obtained were considered valid and required less expenses, time, and effort since the overall population of employees of ISAP was statistically enormous.

The instrument that was used in gathering pertinent data for the conceptualization and development of the study was through direct-data survey. Specifically, a questionnaire survey was executed in this study. The questionnaire served as the main instrument in gathering the data. It was composed of three (3) parts. The first part consisted of the demographic profile of the respondents; the second part determined the level of knowledge of the respondents regarding the employee's rights stated in P.D. 442 or Labor Code of the Philippines; and the third part determined the significant difference between the level of knowledge and the assessment of the respondent on the extent of implementation of the said decree.

The primary step taken by the researchers to collect data was to secure permission and approval. A letter of permission for the conduct of the study was asked from the research



adviser. Following that, letters of permission were sent to the Research Office Department to ask for the population data of employees currently employed in ISAP for the floating of the survey questionnaires. The researchers assured that the data and all their answers would be treated with confidentiality. Secondly, the researcher conducted the formulation of getting the sample out of the total population given by the Research Office Department and employed the sampling technique among the categories of employment status of the employees. The researcher then administered the survey questionnaires to the selected participants of the study. The researchers collected the administered instruments for data organization. Lastly, when all of the respondents completed the questionnaire, it was immediately retrieved for tabulation and statistical analysis. Results of the test were treated with utmost confidentiality and were used only for that purpose.

In data tabulation and analysis, the researchers used descriptive statistics through Microsoft Excel. To characterize the demographic profile of the respondents, the researcher used frequency and percentage distribution because it rendered it simpler to quickly go through the complete data set. It displayed the observations' high and low points as well as whether they were grouped together in one spot or dispersed over the entire scale. As a result, frequency distribution gave an overview of the distribution of the individual observations along the scale used for measurement.

Weighted mean was employed for the responses since it was an average that was calculated by assigning various weights to various specific data.

Kruskal-Wallis was used to statistically determine the significant differences between the level of knowledge and the assessment of the respondents on the extent of implementation of P.D. 442 or



Labor Code of the Philippines when grouped according to their profile variables. Lastly, Pearson R was utilized to determine the significant relationship between the level of knowledge and the assessment of the respondents on the extent of implementation of P.D. 442 or Labor Code of the Philippines.

RESULTS AND DISCUSSION

Profile of the Respondents

Age. The most numbered group in Age is those respondents aged 25 years old and below making up 53 percent of the total sample population. On the other hand, only 1.5 percent of the sample population accounts for those individual whose age is over 40 years old. It could be concluded that those under the age of 25 make up the majority of those employed in the ISAP institution at the time this study was conducted, while people over the age 40 have the lowest employment rates.

Sex. The female dominated the sample population as they comprise the 59.1 percent on the other hand 40.9 only accounts for male. The implication of this is that female outnumbered male in nearly all of ISAP employees that answered to the study.

Civil Status. The single individuals comprise most of the respondents having 90.9 percent, while the remaining 9.1 percent are married individuals. This suggests that the majority of respondents working for ISAP institutions are not married but rather are single.

Highest Educational Attainment. Data reveals that 87.9% of the respondents have a bachelor's degree, with the remaining 12.1% having a masters. It also suggests that the majority of respondents working for ISAP are bachelor's degree holders, while only a small percentage hold master's degree.



Designation. The data in regards to designation, 53 percent of the respondents are currently employed in the Administration, while the lowest has frequency of 2 and percentage of 3 are deployed in two offices: College of Criminal Justice Education and College of Information Technology and Engineering. It could be implied that most of the employees responded in this study are assigned to Administration while the minority are designated to College of Criminal Justice Education and College of Information Technology and Engineering.

Monthly Income. As for their monthly income, those individuals who are receiving 10,000 to 15,000 comprises the 77.3 percent of the sample population, while both 25,001 to 30,000 and 30,001 to 35,000 accounts for 1.5 percent. This implies that most of the employees have monthly income of not more than 15,000 while the minority earns between 25,001 to 35,000.

Length of Service. Most of the respondents are employed for 1 year & 1 day to 3 years, as they comprise the 33.3 percent of the total sample. On the other hand, those who worked for more than 8 years comprise the least number. This indicates that the majority of respondents have been employed by the ISAP institution for more than 3 years, while the least amount has been there for more than 8 years.

Job Status. Most of the respondents have a regular job status as they comprise the 53 percent of the sample population. While 47 percent represents the individual whose employment status is casual. This implies that the ISAP institution employs more regular employees than casual employees.

TABLE 1: Distribution Of Respondents' Level of Knowledge on Labor Code

LEVEL OF KNOWLEDGE	FREQUENCY	PERCENTAGE
Not Knowledgeable	0	0
Knowledgeable	30	45.5



Very Knowledgeable	36	54.5
TOTAL	66	100

Table 1 presents the frequency count and percentage distribution of respondents' level of knowledge about the Labor Code of the Philippines. According to the data, 36 of the respondents are categorized as "very knowledgeable" with the Labor Code, while 30 respondents are classified as "knowledgeable" with the existing Labor Code. Interestingly, none of the respondents fall under the category of "not at all knowledgeable," indicating that there is no complete lack of awareness about the Labor Code among the participants. These results suggest that the majority of respondents in the study possess a considerable level of knowledge regarding their labor rights, as evidenced by the significant number of individuals falling under the "very knowledgeable" and "knowledgeable" categories. This could be attributed to various factors, such as educational background, work experience, and access to information about labor laws.

To corroborate these findings, Alcantara (1994) noted that the Labor Code of the Philippines is regarded as a landmark law that provides comprehensive protection for the rights, welfare, and interests of workers. This level of protection is likely to contribute to the awareness and understanding of labor rights among employees in the country. Additionally, the legal control of employment in the Philippines aims to preserve and encourage employment by protecting workers' interests and rights at work, which could potentially lead to higher levels of knowledge about labor laws among the workforce.

It is important to acknowledge that the study's limitation lies in its focus on respondents from the International School of Asia and the Pacific (ISAP). Further research could be conducted to examine the level of knowledge about the Labor Code among a more diverse sample of employees from various industries and sectors. Nonetheless, the current findings demonstrate



a positive trend, indicating that efforts to promote awareness and understanding of labor rights in the Philippines, as exemplified by the Labor Code, have been effective among the respondents from ISAP.

TABLE 2: Distribution Of Respondents' Assessment Towards the Extent of Implementation of The Labor Code

EXTENT OF IMPLEMENTATION	FREQUENCY	PERCENTAGE
Not Implemented	0	0
Partially Implemented	10	15.2
Implemented	56	84.8
TOTAL	66	100

The data presented in Table 2 indicates a positive overall assessment by the majority of respondents regarding the implementation of the Labor Code within their workplace. However, it also highlights the need for ongoing efforts to ensure consistent enforcement and compliance with labor regulations, particularly in areas where improvements are perceived to be necessary. Policymakers and stakeholders can utilize this information to develop practical and welfare-enhancing policies that strengthen labor law enforcement and further protect the rights and welfare of workers in the Philippines.

The table provides a valuable insight into the respondents' assessment of the implementation of the Labor Code of the Philippines within their workplace. The data reveals that a significant majority, comprising 84.8 percent of the sample population, have observed the policies and guidelines outlined in the Labor Code. This indicates a positive trend, suggesting that a large portion of the respondents perceive their workplace to be compliant with the labor regulations set forth in the Labor Code. On the other hand, 15.2 percent of the respondents expressed that some provisions and policies of the Labor Code are not fully observed in their workplace. While this percentage is relatively lower compared to those who reported overall



compliance, it still highlights the presence of areas where implementation might be lacking or could be improved.

These findings align with the study by Ronconi (2019), which emphasizes the importance of enforcement in labor regulations, especially in developing countries. While the current study focused on the perception of employees regarding the implementation of the Labor Code, Ronconi's research explores the relationship between public enforcement and labor law infractions in developing nations. It is essential to acknowledge that effective implementation of labor regulations relies not only on the existence of laws and policies but also on the enforcement mechanisms to ensure compliance. The positive perception of a significant majority of respondents regarding the implementation of the Labor Code in their workplace is encouraging. It reflects the potential effectiveness of labor law enforcement efforts, both internal (within the organization) and external (by relevant authorities). However, the presence of a portion of respondents who felt that some provisions are not fully observed raises awareness of potential gaps in enforcement or areas that may require further attention. To corroborate and further enhance the analysis, future studies could delve deeper into the specific areas where implementation issues exist and the factors that contribute to these perceptions. Additionally, investigating the experiences of employees in addressing labor-related concerns and their access to grievance mechanisms can provide a more comprehensive understanding of the dynamics between labor regulations and actual workplace practices.

Table 3: Comparison Of Respondents' Level of Knowledge and Assessment Towards Labor Code of The Philippines When Grouped According to Demographic Profile

Demographic Profiles	Statistical Tools	Knowledge	Assessment
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Age	H-Value	6.39	4.43
	P-Value	0.172	0.351
Sex	H-Value	1.85	0.00
	P-Value	0.174	0.95
Civil Status	H-Value	1.85	1.85
	P-Value	0.14	0.281
Highest Educational Attainment	H-Value	2.17	1.16
	P-Value	0.219	0.206
Designation	H-Value	1.51	1.60
	P-Value	0.97	0.35
Service Length	H-Value	0.87	0.58
	P-Value	0.726	0.35
Monthly Income	H-Value	2.83	4.86
	P-Value	0.73	0.433
Job Status	H-Value	7.78	1.38
	P-Value	0.051	0.71

The lack of significant relationships between the demographic profiles and knowledge or assessment of the Labor Code of the Philippines suggests that these specific factors, such as age, sex, civil status, educational attainment, designation, service length, monthly income, and job status, may not be the primary drivers influencing employees' understanding and perception of labor regulations.

However, it is important to note that these findings do not discount the significance of other potential factors that might play a role in shaping employees' awareness of labor rights and their assessment of how well the Labor Code is implemented in their workplace. There could



be other individual or organizational factors, such as workplace culture, training programs, employee engagement, or the presence of labor unions, that may impact how well employees understand and experience labor rights and protections.

To gain a more comprehensive understanding of the factors that influence labor code awareness and assessment, future research could explore additional variables or conduct qualitative studies to delve deeper into employees' perspectives and experiences. By examining a broader range of factors, policymakers and organizations can develop targeted interventions and initiatives to enhance employees' knowledge of labor laws and promote better compliance with the Labor Code.

Moreover, considering the dynamic nature of workplaces and labor practices, it is essential to periodically reevaluate these relationships to ensure that policies and practices remain relevant and effective in protecting workers' rights and welfare. As cited in Ronconi's study on the enforcement of labor regulations in developing countries, policymakers need to be attentive to local institutional structures and economic conditions to design welfare-enhancing policies effectively.

Overall, the present study's findings underscore the need for continuous efforts to promote labor code awareness and compliance among employees and employers. By identifying and addressing potential barriers to knowledge and understanding, policymakers can strengthen labor regulations and create a more supportive and equitable work environment for all employees.



**Table 4: Test Of Relationship of The Knowledge and Assessment of
The Extent of Implementation of Labor Code of The Philippines**

	r-value	p-value
Knowledge on Labor Code	0.463 **	00.00
Extent of Implementation of Labor Code		

Table 4 presents the Pearson R scores, which assess the correlation between respondents' knowledge of the Labor Code of the Philippines and their assessment of its implementation in their workplace. The Pearson R score of 0.463 indicates a moderate positive correlation between knowledge and assessment. This means that as respondents gain more knowledge about P.D. 442 (the Labor Code), their assessment of the extent of its implementation in their workplace also increases.

The significant p-value of less than 0.001 further supports the strength of this correlation, indicating that the relationship between knowledge and assessment is not due to chance but is indeed meaningful. The sample size of 66 respondents used in the analysis is also mentioned (r=0.463), indicating the number of participants used in the calculation.

The finding of a positive correlation aligns with a previous study conducted by Estanilao L.O. and Zaspas L. Z. (2014), which examined the knowledge level of employees and managers of selected cooperatives in Aklan regarding the Labor Code. The study reported that employers and managers in Aklan had a very high knowledge level of the Labor Code. This is consistent with the current study's finding of a positive correlation between knowledge and assessment. It suggests that employees who possess more knowledge about labor regulations are more likely to have a more accurate assessment of their workplace's adherence to the Labor Code.



The moderate positive correlation discovered in the present study implies that promoting employees' knowledge of labor rights and regulations could potentially lead to a better understanding and evaluation of their workplace's compliance with the Labor Code. Organizations and policymakers can use this insight to develop targeted educational programs and initiatives that enhance employees' understanding of labor laws. By equipping employees with better knowledge of their rights, organizations can foster a more informed workforce that can actively participate in ensuring the proper implementation of labor regulations and the protection of workers' rights.

It is important to note that while the correlation is significant, it is still only moderate in strength. This means that other factors may also contribute to employees' assessments of labor code implementation in their workplace. Future research could investigate additional variables that may influence this relationship further, such as workplace culture, communication channels, and employee satisfaction with labor practices. Such comprehensive research can lead to more comprehensive strategies in promoting a fair and equitable work environment that upholds labor rights and fosters positive employer-employee relations.

CONCLUSION

The study shows that International School of Asia and the Pacific employees possess a significant level of knowledge about the Philippine Labor Code, with a majority categorized



as "knowledgeable" or "very knowledgeable." Additionally, most respondents reported a positive perception of labor code implementation in their workplace. The absence of significant relationships between demographic profiles and knowledge or assessment suggests that factors like age, sex, educational attainment, and employment status may not play a major role in influencing employees' understanding and perception of labor regulations. However, it is essential to consider other potential factors, such as workplace culture, training, and employee engagement, in promoting labor code awareness and compliance.

RECOMMENDATIONS

By implementing these recommendations, ISAP and other organizations can foster a more informed and empowered workforce, leading to improved compliance with labor regulations and better protection of workers' rights and welfare. Additionally, future research should explore other potential factors that may influence labor code awareness and assessment to develop more comprehensive strategies for promoting fair and welfare-enhancing labor policies. The following are the specific recommendations offered from this study:

1. **Educational Programs:** Implement educational programs and workshops that focus on labor rights and the Philippine Labor Code to further enhance employees' knowledge and understanding of their rights and protections. These programs should be tailored to address the specific needs of different employee groups.
2. **Collaboration with Government Agencies:** Collaborate with the Philippine Department of Labor and Employment to disseminate information about labor laws and regulations. Establishing partnerships with relevant authorities can help ensure



accurate and up-to-date information reaches employees.

3. **Transparent Labor Practices:** Encourage transparent labor practices within the organization to promote a fair and equitable work environment. Regular communication about labor policies and practices can contribute to employees' trust and satisfaction.
4. **Mechanisms for Reporting Violations:** Establish effective mechanisms for reporting labor violations and addressing employees' concerns regarding labor code implementation. Providing accessible channels for employees to voice their grievances can contribute to a more supportive work environment.
5. **Periodic Evaluation:** Periodically reevaluate labor code awareness and compliance among employees to assess the effectiveness of interventions and identify areas for improvement. Continuous monitoring will help maintain up-to-date and relevant policies and practices.

REFERENCES

- Aguba, R., Cruz, J., Guzman, M., Mangahas, F., & Realon, J. (2017). Assessing Potential Impact of ASEAN Integration to Philippine Labor Force: A Call for Review of Labor Laws on Pre-Employment and Human Resource Development. De La Salle University. <https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/research-congress-proceedings/2017/RVREBM/RVREBM-I-002.pdf>
- Angara J., Fernandez D., Tanada E. (2011). House Bill No. 768: An act providing for a Magna Carta of workers in informal employment. House of Representatives, Quezon



- City, Philippines. <https://issuances-library.senate.gov.ph/bills/house-bill-no-768-15th-congress-republic>
- Anonuevo, A., & Stiftung, F. E. (2000). An Overview of the Gender Situation in the Philippines. <https://library.fes.de/pdf-files/bueros/philippinen/50069.pdf>
- Azucena C. A. (2010). Employment and outsourcing under Philippine law. Manila, Philippines: Rex Book Store. <https://www.rexestore.com/labor-code-of-the-philippines/619-employment-and-outsourcing-under-philippine-law.html>
- Carroll, J. (2002). Philippine Labor Unions. <http://philippinestudies.net/ojs/index.php/ps/article/view/2827/6839>
- Estanilao L.O. and Zaspas L. Z. (2014) "Labor Code: Knowledge Level Among Employees and Managers of Selected Cooperatives in Aklan", <https://www.termpaperwarehouse.com/essay-on/Labor-Code-Awareness/229707>
- Fajardo, L. M., Corpuz, M., Mariano, P. D., Aguinaldo, A., & Balaria Jr, F. Status of Compliance to Dole-Department order 174 of Selected Fast-food Establishments in Cabanatuan City, Philippines. <https://www.academia.edu/download/68309657/2IJAEMS-10620193-Statusof.pdf>
- Fernandez, R. C., Ferdinand, A. (2014). Child Labor, Poverty and School Attendance: Evidences from the Philippines by Region. https://www.researchgate.net/publication/319505916_Child_Labor_Poverty_and_School_Attendance_Evidences_from_the_Philippines_by_Region
- https://www.ilo.org/manila/projects/WCMS_378024/lang--en/index.htm
- Imperial, G. S. (2004). Understanding Philippine labor policies. <https://econ.upd.edu.ph/pre/index.php/pre/article/download/171/580#:~:text=Philippine%20labor%20policies%20tend%20to,primary%20function%20of%20labor%20p>



olicy.&text=As%20a%20social%20policy%2C%20labor,but%20it%20cannot%20de
termine%20it.

International Labor Office. (2002). Decent work and the informal economy. Geneva,
Switzerland: Author.

<https://www.ilo.org/public/english/standards/relm/ilc/ilc90/pdf/rep-vi.pdf>

Kelly, P. F. (2009). The Political Economy of Local Labor Control in the Philippines.
<https://www.jstor.org/stable/3594084>

Mahy, P., Sale J. (2014). Classifying the Legal System of the Philippines: A Preliminary
Analysis with Reference to Labor Law.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2436786

Ofreneo R. E. (1993). Labor and the Philippine economy (Doctoral dissertation). University
of the Philippines, Quezon City, Philippines.
<https://econ.upd.edu.ph/pre/index.php/pre/article/download/985/883>

Ofreneo R. E., Hernandez J. (2010). Freedom of association and collective bargaining in the
Philippine export processing zone. Quezon City, Philippines: UP SOLAIR.

Ofreneo, R. E. (2013). Precarious Philippines: Expanding Informal Sector, “Flexibilizing”
Labor Market. <https://journals.sagepub.com/doi/abs/10.1177/0002764212466237>

Peters, R. J. (1994). Labor Education in the Philippines.
<https://go.gale.com/ps/i.do?id=GALE%7CA15502595&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=0160449X&p=AONE&sw=w&userGroupName=anon%7Ee0dca652&aty=open+web+entry>

Ramos, E. (2007). Labor Conflict and Recent Trends in Philippine Industrial Relations.
<https://www.jstor.org/stable/29791922>



- Republic of the Philippines. (1987). Philippine Constitution. Manila, Philippines: Republic of the Philippines. <https://www.officialgazette.gov.ph/constitutions/1987-constitution/>
- Reyes, E., Sanchez, T. (1990). An Assessment of Labor and Employment Policies in The Philippines, 1986-1988. <https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/3645/pidswp9009.pdf>
- Robles, W. (2009). Youth at Work: A Needs Assessment of Integrating Basic Labor Education in Selected Laboratory High Schools in Metro Manila. *Philippine Journal of Labor and Industrial Relations*, XXIX, (1&2). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2536609
- Ryan C. Fontanilla & Christian R. Guzman (2023), The Quality of Online Learning Delivery and The Learning Management System of The Medical Colleges of Northern Philippines (MCNP) And International School of Asia and The Pacific (ISAP): A Correlational Study, The Seybold Report ISSN 1533-921, Vol. 18, 06, https://seyboldreport.org/article_overview?id=MDYyMDIzMDgyMjU3NDYxNTg3, DOI 10.17605/OSF.IO/P4NX8.
- Sale, J. (2012). Labor Market Governance and Regional Development in The Philippines: Uneven Trends and Outcomes. https://www.researchgate.net/publication/263648951_Labor_Market_Governance_and_Regional_Development_in_The_Philippines_Uneven_Trends_and_Outcomes
- Sibal J., Amante S., Tolentino C. (2007). Globalization and changes in work and employment conditions in the Philippines. Seoul, Korea: KLI. https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-manila/documents/publication/wcms_541519.pdf



Tolentino, M. C. M. (2010). Child labor in Navotas, Philippines: social construction of reality. *Development and Conflict in the 21st Century*, 128-139.
<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=d922e808147ce92926a94a6b386ee4bc5d251984#page=133>