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How Does Participating in Budgeting and Culture Increase Government Performance?

Putri Mutira*, Meutia, Helmi Yazid, Elvin Bastian¹

Abstract

The purpose of this research is to examine the impact of budgetary participation and organizational culture on employee performance. Since the implementation of regional autonomy in Indonesia, budgeting practices and culture have become crucial to enhance government employee performance. Previous studies on participative budgeting highlight how it impacts subordinates" attitudes and responses. Furthermore, this topic is the subject of considerable debate. The empirical evidence on the relationship between budget participation and government employee performance is ambiguous and inconsistent. Likewise, research in the Indonesian context also generated varied results. The population of this study is echelon II, III, IV officials of Ministry of Marine Affairs and Fisheries Republic of Indonesia. Data collection is done by giving questionnaires to respondents. Hypothesis testing is done using Smart PLS. The results indicated that participation in budgeting and organizational culture influence the performance of government officials partially and simultaneously.

Keywords: Participation in budgeting, Organizational culture, Government employee performance.

Introduction

Budgeting is part of control mechanism that can be used to integrate the entire scope of organizational activity into a single coherent summary (Hansen et al., 2003). To date, many scholars are studying budgeting. Their investigation mainly relied on accounting performance measures (Hartmann, 2000) and participative budgeting (Brownell & Dunk, 1991). This paper then tries to contribute to the literature by focusing on the latter. According to Brownell (1982), participative budgeting is defined as a process in which individuals "are involved in, and have influence on" (p. 124) the budgeting processes that directly affect them. Bruns and Waterhouse (1975) stated that "budgets are financial plans and provide a basis for directing and evaluating the performance of individuals or segments of organizations" (p. 180). Otley (1999) added that "budgeting has traditionally served as a central plank of most organizations' control mechanisms" (p. 370).

Since the implementation of the regional autonomy policy in Indonesia, regional governments have encountered new issues in budget management, including a participatory method involving each unit to submit, develop, and carry out budget preparation. Following this enactment, a more detailed rule was produced, which underpins the government's implementation of a participatory planning and budgeting process to boost efficiency and yield for the government within the context of public sector reform. On the other hand, government employee performance is tightly connected to financial management, which requires administrators to submit financial reports accountably and transparently. The government has regulated this issue through the Regional Government Law No. 32 of 2004, requiring regional administrations to manage their resources efficiently and effectively in compliance with applicable rules.

¹Sultan Agung Tirtayasa University Email: *putri.mutira@gmail.com Participative budgeting is a process in which subordinates determine their budgets. Since subordinates are often better informed about their abilities and environmental factors than superiors, participative budgeting is a valuable tool for planning, controlling, and allocating resources. Specifically, subordinates can provide superiors with information that reduces uncertainty, improves production decisions, and increases profitability (Saha & Samanta, 2019)

However, subordinates may misuse this advantage by including their private information to benefit themselves at the firm's expense. In other words, while participation in budgeting is considered crucial in firms, there is a potential for subordinates to misuse their private information opportunistically. For this reason, this topic receives much attention and is one of the most widely studied in managerial accounting (Brink et al., 2018).

Participation in budgeting and organizational culture are parts of a company's management controlling system. Shield and Young (1993) illustrated that participation in budgeting functions to control the planning. They emphasized that the success of participation in budgeting can be affected, among them, by the attitude/behaviour of in-charged parties. Meanwhile, according to Simon and Widener (year), organizational culture refers to a belief system that contains three items reflecting the extent to which organizational values, purpose and direction are codified and communicated.

Previous studies on participative budgeting (e.g., Brownell, 1982; Derfuss, 2009; Kyj & Parker, 2008; Shields & Shields & Young, 1993) highlight how it impacts subordinates' attitudes and responses, not only through motivation and performance but also by induction of budgetary slack. However, research on this topic appears to have stalled (Libby & Lindsay, 2010) and become disconnected from practitioners' concerns (Libby & Lindsay, 2010; Selto & Widener, 2004).

Despite the fact that scholars have presented a complete assessment of budgeting's flaws, it is a regular aspect of modern business and is frequently studied in academia (Hartmann, 2000; Libby, 1999; Libby & Lindsay, 2010; Sandalgaard, 2012). This subject has also been covered extensively in the literature. Kenno et al. (2018), recently published a study of nearly 250 budgeting articles, demonstrating that research in this area is still popular and relevant.

Furthermore, this is a contentious issue. For example, the empirical evidence establishing the relationship between budget participation and government employee performance is contradictory and inconsistent. There are issues with pseudo-participation, budgetary laxity, and setting standards that are either too low or too high (Hansen & Mowen, 2013). In several instances, government organizations presented research findings indicating a positive and substantial effect on managerial performance (Sakti & Taman, 2017).

Likewise, research in the Indonesian context also generated varied results. The studies of Indriantoro (1993), Irianto (2014), Sulistyaningsih and Yuliantoro (2015), Pratama (2016), and Apriansyah, Zirman, and Rusli (2014) found that participation in budgeting has a significant positive impact on the government employee performance.

Conversely, other scholars, such as Kennis (1979), Wibowo (2010), Hazmi (2014) and Apriansyah, Zirman, and Rusli (2014) no significant effect was found. Furthermore, according to Holmes and Marsden (1996), organizational culture was reported to affect government employee performance. The finding was backed up by Indriantoro (1993) and Apriansyah, Zirman, and Rusli (2014), who discovered the positive effect of organizational culture on government employee performance.

The objectives to be achieved in this research are: to determine the effect of budget participation on the performance, to determine the influence of organizational culture and to determine the effect of participation in budgeting and organizational culture on the performance of the Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia (Tanaka et al., 2019).

Theoretical Background

This research explicitly discusses government employee performance in carrying out duties and functions. It takes into account several aspects, such as the level of participation in budgeting, commitment to the organization, and organizational culture in the employees' division. In this research, employee performance was reviewed by the employee's success in carrying out the governance. Meanwhile, participation in budgeting was assessed by the employee's involvement in delivering their ideas during the budgeting process. Then, the organizational commitment was reviewed from the entity's commitment to achieving good governance. Finally, organizational culture was reviewed from the habits that take place in government entities in carrying out their operational activities.

Participation in Budgeting

According to Robbins and Jugde (2017), participation in budgeting is a concept where subordinates are involved in several activities, from decision-making to other activities, to certain degrees with their superior. Hansen and Mowen (2008) explained that such budgeting processes are beneficial because they 1) insist the managers make a plan, 2) provide information that can be used to fix the decision-making, 3) provide a standard for work evaluation, and 4) improve communication and coordination.

Garrison et al. (2020) added that participation in budgeting could affect individuals at all organizational levels. The employees feel part of the team whose views and assessments are appreciated by top management. In addition, participation in budgeting motivates individuals to set their goals rather than imposing their superiors' goals on them.

This can make the individuals have the commitment and avoid unrealistic goals that might be difficult to achieve for the managers. Most importantly, budgeting estimations prepared by front-line managers are often more accurate and reliable than those prepared by top management who are not really involved in daily operational activities (Kearney, 2019).

Anthony and Givndarajan (2005) argue that participatory budgeting will be easier to accept if the budgeting is under the supervision of managers and produces effective information exchanges between budget makers and budget executors who experience products and markets first-hand. Although participatory budgeting looks promising, Hansen and Howen (2008) remind three weaknesses and issues that might appear in participatory budgeting.

The first (1) is in setting standards that are too low or too high. After that, there is (2) slack in budgeting and (3) pseudoparticipation. The setting of a budgeting target tends to become a manager's individual target during participatory budgeting. Thus, setting budget targets that are too easy or too difficult might cause a decrease in manager performance. If the target is too easy to achieve, the managers might lose motivation leading to a decline in performance. However, if the target is too difficult, it might fail to achieve and frustrates the managers. Eventually, it pushed the managers to worse work performance.

Another weakness in this system is Pseudoparticipation. It occurs when the top management takes full control over the budgeting processes while at the same time seeking support and participation from subordinates. Top managers are only trying to seek approval from their subordinates for the drafted budget, and usually, it is just a formality. In fact, they are not really seeking input for budget preparation. This makes the positive effects of pseudoparticipation difficult to achieve.

Organizational Culture

According to Hofstede et al. (1990), a cultural organization is the values of what members of the organization believe. These values are outlined in the form of behavioral norms of individuals or

organizational groups where the individual works. Organizational culture has been defined as a system of shared meaning maintained by members that distinguishes their company from others Robbins and Judge (2017). Therefore, organizational culture is shared norms and values that members believe in, which become the organization's characteristics in acting or carrying out activities.

Hofstede defined essential qualities that are used as a reference in understanding and measuring the existence of organizational culture: (1) Work results oriented, i.e. the amount to which management focuses on work results rather than the strategies and processes employed to obtain these results. (2) People-oriented, i.e., the amount to which management decisions consider the effects of results on people in the company.

Government Employee Performance

Employee performance is a work outcome that is achieved by a government employee in an organization in accordance with their authority and responsibility in the efforts to reach the organization's goals. This variable is usually measured using an instrument developed by Mahooney et al. (1963), which consists of the following:

- Planning. It is the determination of policies and a set of activities to be implemented taking into
 account the current and future conditions. Planning aims to provide guidelines and procedures for
 implementing objectives, policies, budgeting procedures and work programs so that they are carried out
 in accordance with predetermined targets.
- 2. Investigation. It is a set of activities that aims to conduct an examination through information collection and presentation as material for recording and preparing reports so as to facilitate the implementation of measurement results and analysis of the work that has been done.
- 3. Coordination. It aligns actions that include exchanging information with people in other organizational units in order to facilitate communication and adjustment to the program that will be executed. Coordination is a process of partnership establishment with other divisions in an organization through information exchanges which are linked to some adjustments of current work programs.
- 4. Evaluation is an assessment performed by superiors upon the planned program. It aims at assessing employee and work record that allows the superiors to make the right decision.
- 5. Supervision. It refers to an assessment of proposed performance observed and reported by superiors.
- 6. Staffing. It is a process that aims to maintain and retain the employee in an organizational unit or division. In addition, it is also responsible for recruiting new employees, placing, and promoting the employee in a unit or other units.
- 7. Negotiation. It is an effort to obtain an agreement in terms of purchasing, sales, or contracts for goods and services.
- 8. Representation. It refers to the process of conveying information about the vision, mission, and activities of the organization through group meetings, business, and consultation with other offices.

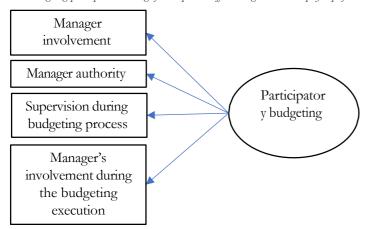
Conceptual Framework and Hypothesis Development

Participation in Budgeting and Government Employee Performance

The budget that has been set functions as planning and performance criteria, where budgeting is used as a control system to measure managerial performance. In order to prevent unwanted effects, organizational members should involve management at the lower level during the budgeting process. Thus, participatory budgeting can be seen as a managerial approach that can improve the performance of each organizational member. With this participation, these members are expected to improve their performance per the target set (Sardjito & Muthaher, 2007).

Research in Indonesia shows that participation in budgeting has an impact on government employee performance (Irianto, 2014; Sulistyaningsih & Yuliantoro, 2015; Pratama, 2016). Therefore, the current researchers can draw a hypothesis as the followings:

H1: Budgeting participation has significant, positive effects on government employee performance.



Organizational culture and Government Employee Performance

Organizational culture is the values of what the organization's members believe. These values are usually expressed in behavioral norms of individuals and organizations where they work (Hofstede et al., 1990). They believe that national and organizational cultures are two identical phenomena. The difference between these two cultures is reflected in the manifestation of culture into values and practices (Hofstede et al., 1990).

Holmes & Marsden (1996) outline that organizational culture affects behavior, ways of work, and motivation of managers and their subordinates to reach the organization's performance. A study by Apriansyah, Zirman, and Rusli (2014) indicates that culture significantly affects employee performance. This result aligns with Irianto's (2014) research that shows organizational culture's positive effect on employee performance.

Based on the above discussion, the researchers propose the following hypothesis:

H2: Organizational culture significantly affects government employee performance

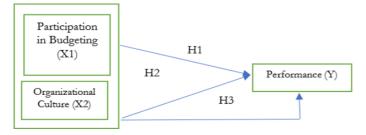
Participation in Budgeting, Organizational Culture, and Government Employee Performance

Participation and organizational culture can affect the employee's behavior because organizational culture is usually the employee's habits in doing something. Today, the regional government is expected to have a good internal and external atmosphere in order to create a decent organizational culture that promotes good government governance and employee performance. This statement is in accordance with Holmes and Marsden (1996), who claimed that organizational culture has an impact on behavior, ways of work, and motivation of managers and their subordinates to achieve the organization's goal.

In 2014, Irianto found that participation in budgeting, organizational culture, and locus of control positively and significantly affect the performance of regional government employees. This finding was confirmed by Apriansyah, Zirman, and Rusli (2014), who simultaneously discovered that participation in budgeting, organizational commitment, job satisfaction, job-relevant information, and organizational culture have a significant positive effect on managerial performance. As elaborated on the above discussion, the current research draws a hypothesis as the following:

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H3: Participation in budgeting and organizational culture affect the government employee performance.



Methods

Participation in Budgeting Measurement

In this research, participation in budgeting was measured using an instrument developed by Milani (1975). It aimed to evaluate the participation of managers in various decisions that they made. According to Milani (1975), the manager's participation can be seen in several aspects, such as:

- 1. Manager's involvement in budgeting processing. This aspect measures how far the managers are involved in the budgeting processes.
- 2. Manager's authority in budgeting processing and execution. It examines how far the manager's authority is in preparing the budgeting and the execution.
- 3. Manager's involvement in supervising the whole process of budgeting preparation. It examines to what extent the managers are involved in preparing the budgeting.
- 4. Manager's involvement in controlling the goal of the budgeting.

The indicators of Organizational Culture

There are several characteristics that can be used as a reference in understanding and assessing the existence of organizational culture. These characteristics were developed by Hofstede (1990):

- 1. These characteristics are oriented with outcomes. It evaluates to what extent the management concentrate on their work outcomes rather than techniques and process to reach the outcomes.
- 2. The characteristics must also be oriented to people. It assesses how far the management decision calculates the effects on the people in the organization.

Government employee performance is a comprehensive matter. Warisno (2009) conducted research on the Ministry of Marine and Fisheries and found that budget users (directorate/sub-directorate/body/bureau/office) would generate a different level of performance in accordance with their capabilities and responsibilities.

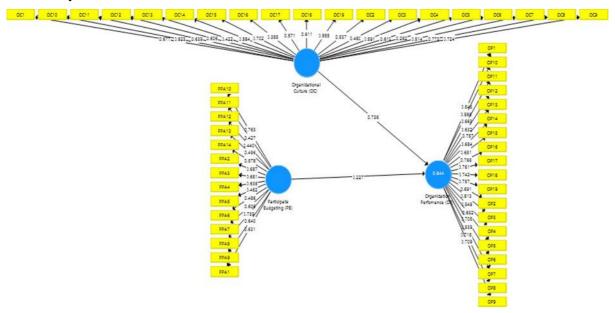
The performance of government employees was based on their ability to carry on their managerial duties, investigation, coordination, supervision, staff arrangement, negotiation, and representation (Mahoney, Jerdee, & Karrol, 1963). Meanwhile, managerial performance was measured using questionnaires with indicators developed by Mahoney, Jerdee, and Karrol (1963): Planning, Investigation, Coordination, Evaluation, and Staffing

Data Sources and Data Modeling

The objects and samples of this research were officials who served as budget users and budget user powers that were held by the highest structural position. This position is usually responsible for taking strategic decisions in their working unit. One hundred fifty questionnaires were distributed in this

Ministry, but only 105 were returned to the researchers. Among them, 60 respondents were classified as valid and proceeded to the next stage.

Data Analysis



Hypotheses	Path Coefficients	P Values	s Results
H1 Participation in Budgeting (PB) -> Organization Performance (OP)	0.234	0.019	Accepted
H2 Organizational Culture (OC) -> Organization Performance (OP)	0.725	0.000	Accepted

Finding and Discussion

Participation in Budgeting and Organizational Culture showed a significant effect on government employee performance.

Based on the statistical analysis, this research found that the first hypothesis (H1) was correct, where participation in budgeting affected performance, which indicates a linear relationship. Participation in budgeting can encourage an agreement between the top management/budget power and the subordinate's/budget users, which in turn can improve performance. Such participation is also expected to improve managerial performance in providing services to the public.

This research noted that several aspects could provide effective and efficient information, such as input, quality, output, and results. With participation in budgeting, working units are expected to improve their performance. When the superiors approve the planned goals or standards, the employees will work very hard to manifest the goals/standards. In addition, they will have a personal responsibility to reach the goals due to their involvement in the budget preparation. When the target of budget preparation is achieved, organizational performance is perceived to improve.

Based on a continuum line of budget participation variables, the statement "To actively participate and provide suggestions in the budget preparation" gained the highest score. This score indicates that the employees attend and actively participate in the budget preparation meeting. They also provide advice during the meeting.

The above statement was also confirmed by the data about the transparency in the implementation and

the improvement of participation in budgeting. In this meeting, the Ministry socialized the suggested budgeting to the employee by understanding the community's needs so that the budgeting preparation can yield a good result.

Another purpose of this meeting was to encourage employee performance in developing programs that align with the target and goals. Involving the employee in the meeting also aimed to improve their performance because they might feel part of the team. Therefore, participation in budgeting is necessary to support government employee performance.

The second highest score was "The superiors appreciate opinions or advice during the budgeting preparation process". This item indicates the positive effect of superiors' appreciation on employee performance. The next higher score was obtained from the statement "Having an important contribution during the budget preparation". In other words, high contribution during meetings can boost the positive effects on organizational performance.

The Effect of Organizational Culture on Government Employee Performance

Based on the statistical analysis, this research found that the second hypothesis (H2) was accepted, where organizational culture affected government employee performance. The results indicate that organizational culture positively affects employee performance in a linear relationship. Basically, organizational culture is the values of the organization members' beliefs. These values are expressed in the norms of behavior of individuals or groups of organizations in the place where they work.

Organizational culture is the phenomenon that is reflected in the manifestation of culture into values and practice. The improvement of the performance in the Ministry of Marine and Fishery will be determined by the culture in the organization, for example, values about punctuality when attending meetings about budget preparation. Organizational culture affects behavior and ways of work to achieve organizational performance. The improvement of culture in an organization can improve the performance of that organization.

Based on the continuum line of organizational culture variables, the statement "Calculating all possible risks" gained the highest score. The high score shows that the employees carry out their job thoroughly. They seriously calculate all risks that might happen during the budget preparation. The second highest score was the statement "To maintain a good relationship with workmates". It can affect employee's good performance because their efforts to maintain a good relationship will keep the stability of the work atmosphere.

The next highest score was the statement "To discuss every problem and find the solutions". This indicates that every problem that occurs during the budget preparation in the organization will be solved together. Hence, it will positively affect employee performance because they pay detailed attention to every issue in the organization.

The Effect of Participation in Budgeting and Organizational Culture on Government Employee Performance

Based on the statistical analysis, the research found that the third hypothesis (H3) simultaneously affected the employee's performance in the Ministry of Marine and Fishery. The results of the research indicate that budgetary participation and organizational culture influence the performance of local government employees. This means that organizational culture has a linear relationship with the performance of the employees.

The process of budgeting preparation plays a vital role in determining the success of budgeting and performance. Besides, organizational culture is a system of values, beliefs and norms that members uniquely share. Organizational culture for internal parties will function as guidance for all behaviors in Kurdish Studies

the organization. It is hoped that this culture can be workable, has a successful completion, and consequently will give employee confidence. These characteristics will be able to increase the employee's expectations so that their performance increases.

Conclusion

This study aims to determine the effect of budgetary participation and organizational culture on government employee performance. Using the survey method and PLS-SEM, we provided evidence for this query. Accordingly, the results highlighted the importance of budgetary participation and organizational culture in affecting government employee performance. The study found that government employees who were actively involved in the budgetary process and had a positive organizational culture exhibited higher levels of performance. This suggests that when employees are given the opportunity to participate in the budgetary decision-making process and work in a supportive and inclusive culture, they are more motivated and engaged in their work, leading to improved performance outcomes.

These findings have significant implications for government organizations seeking to enhance employee performance and overall efficiency. One potential implication is that government organizations should prioritize creating a participatory budgetary process. By involving employees in the decision-making process, organizations can tap into their knowledge and expertise, resulting in more informed and effective budgetary decisions. Additionally, fostering a supportive and inclusive culture can help create a positive work environment where employees feel valued and motivated to perform at their best.

This, in turn, can lead to increased efficiency and productivity within the organization. Moreover, involving employees in the budgetary process can also enhance their sense of ownership and accountability. When employees have a say in how resources are allocated, they are more likely to feel a sense of responsibility for the outcomes and financial performance of the organization. This can create a stronger sense of commitment and dedication among employees, ultimately driving them to go above and beyond in their work. Additionally, the participatory budgetary process can also serve as a platform for fostering creativity and innovation within the organization.

When employees are encouraged to contribute their ideas and perspectives, it opens up opportunities for fresh insights and novel approaches to problem-solving. This can lead to the development of more effective strategies and solutions, ultimately improving the organization's competitive advantage in the market. Moreover, by involving employees in the budgeting process, it can enhance their understanding of the financial aspects of the organization, promoting financial literacy and responsibility among the workforce. This, in turn, can contribute to better financial decision-making at all levels of the organization, leading to improved overall financial performance.

This study still has several limitations that need to be addressed or further investigated by researchers in the future. For instance, they can examine additional variables, such as Good Corporate Governance, motivation, and organizational commitment, either as independent, moderating, or intervening variables. Additionally, future research could explore the impact of different leadership styles on employee performance within government organizations. It would also be beneficial to investigate the influence of external factors, such as economic conditions and political stability, on employee performance outcomes. By addressing these limitations, researchers can gain a more comprehensive understanding of the factors that contribute to improved performance and efficiency in government organizations.

Furthermore, future research could delve into the role of organizational culture in shaping employee performance within government organizations. Examining how values, norms, and practices within the organization affect employee motivation, job satisfaction, and commitment could provide valuable

insights for enhancing performance outcomes. Additionally, exploring the effectiveness of various performance management systems and incentive structures in government organizations would be crucial in identifying strategies to optimize employee performance. Moreover, understanding the role of training and development programs in equipping employees with the necessary skills and knowledge to perform their tasks effectively could also be a fruitful area of investigation. Overall, by exploring these avenues, researchers can gain valuable insights into how to improve employee performance in government organizations and ultimately enhance overall organizational effectiveness. This research could inform the development of evidence-based policies and practices that promote a motivated and skilled workforce. Moreover, it could also contribute to the creation of a positive work environment that fosters employee satisfaction and engagement. Ultimately, these efforts could result in improved public services and increased citizen satisfaction with government organizations.

References

- Brink, A. G., Coats, J. C., & Rankin, F. W. (2018). Who's the boss? The economic and behavioral implications of various characterizations of the superior in participative budgeting research. *Journal of Accounting Literature*, 41(1), 89–105. https://doi.org/10.1016/j.acclit.2018.03.004
- Brownell, P. (1982). Participation in the budgeting process: When it works and when it doesn't. *Journal of Accounting Literature*, 1, 124–153.
- Brownell, P., & Dunk, A. S. (1991). Task uncertainty and its interaction with budgetary participation and budget emphasis: Some methodological issues and empirical investigation. *Accounting, Organizations and Society*, 16(8), 693–703. https://doi.org/10.1016/0361-3682(91)90020-F
- Bruns, W. J., & Waterhouse, J. H. (1975). Budgetary control and organization structure. *Journal of Accounting Research*, 13(2), 177–203.
- Garrison, R. H., Noreen, E. W., & Brewer, P. C. (2020). Managerial accounting 17th ed. McGraw Hill.
- Hansen, D. R., & Mowen, M. M. (2008). *Managerial Accounting 8th Edition*. Thomson South-Western. https://ilubis.files.wordpress.com/2008/05/managerial-accounting_8e_hansen-ebook.pdf
- Hansen, S. C., Otley, D. T., & Van der Stede, W. A. (2003). Practice developments in budgeting: An overview and research perspective. *Journal of Management Accounting Research*, 15(1), 95–116.
- Hartmann, F. G. H. (2000). The appropriateness of RAPM: Toward the further development of theory. *Accounting, Organizations and Society*, 25(4–5), 451–482. https://doi.org/10.1016/S0361-3682(98)00036-1
- Kearney, C. (2019). Strategic Planning for Financing and Growing Biotechnology Companies. *Journal of Commercial Biotechnology*, 24(4). doi: https://doi.org/10.5912/jcb917
- Kenno, S. A., Lau, M. C., & Sainty, B. J. (2018). In Search of a Theory of Budgeting: A Literature Review. *Accounting Perspectives*, 17(4), 507–553. https://doi.org/https://doi.org/10.1111/1911-3838.12186
- Libby, T., & Lindsay, R. M. (2010). Beyond budgeting or budgeting reconsidered? A survey of North-American budgeting practice. *Management Accounting Research*, 21(1), 56–75. https://doi.org/10.1016/j.mar.2009.10.003
- Otley, D. (1999). Performance management: A framework for management control systems research. Management Accounting Research, 10(4), 363–382. https://doi.org/10.1006/mare.1999.0115
- Robbins, S. P., & Jugde, T. A. (2017). Organizational Behaviour 16th Edition. Pearson.
- Saha, S., & Samanta, G. (2019). Synthetic drugs transmission. Letters in Biomathematics, 6(2), 1-31. doi: 10.30707/LiB6.2Saha
- Tanaka, S. C. S., Hortolani, A. C. C., Pissetti, C. W., Paschoini, M. C., Cintra-Ruiz, M. T., Rodrigues, V., & Balarin, M. A. S. (2019). Polymorphisms in the IL17A gene are not involved in the development of preeclampsia in the Brazilian population. *Jornal Brasileiro de Patologia e Medicina Laboratorial*, 55, 170-181. doi:10.5935/1676-2444.20190019