Unabsorbed Slack Resources and Enterprise Innovation

Subjects: Business, Finance

Contributor: Yan Zhang, Ziyuan Sun, Mengxin Sun

In 1963, Cyert & March defined slack resources as “the difference between total resources needed by the enterprise organization to maintain the status quo and the resources actually possessed by the organization”. There exist different forms of slack resources, such as idle machinery and equipment, surplus cash, extra employees, and semi-finished products in processing. Technological innovation plays an important role in the success of enterprises and it is a critical factor for them to gain strong short-term market performance and long-term competitive advantage. Due to long cycles, large investments, and high adjustment costs, adequate resource support is essential to ensure the sustainability of innovation activities.

Keywords: unabsorbed slack resources ; enterprise innovation ; moderating effect ; managerial ability ; environmental uncertainty

1. Introduction

Technological innovation plays an important role in the success of enterprises [1] and it is a critical factor for them to gain strong short-term market performance and long-term competitive advantage [2]. Due to long cycles, large investments [3], and high adjustment costs, adequate resource support is essential to ensure the sustainability of innovation activities. However, in the Chinese capital market, the inadequate financial system and information asymmetry problems make it difficult for most enterprises to obtain innovation resources from external sources. Consequently, the role of internal resources, i.e., slack resources, is becoming more and more important for innovation.

In 1963, Cyert & March defined slack resources as “the difference between total resources needed by the enterprise organization to maintain the status quo and the resources actually possessed by the organization” [4]. There exist different forms of slack resources, such as idle machinery and equipment, surplus cash, extra employees, and semi-finished products in processing. According to liquidity and flexibility, the slack resources are divided into unabsorbed slack resources and absorbed slack resources [5]. Unabsorbed slack resources with strong liquidity are not absorbed within the enterprise, and they can be used to cope with market competition and institutional pressure in a competitive environment, meet diversified resource demands, and help enterprises respond rapidly to environmental changes [6]. In contrast, absorbed slack resources have been internalized in the enterprise process with poor liquidity and strong specificity. They can only be used for specific purposes and are not easily reconfigured, making it difficult for managers to convert them into specific resources required by innovative activities in a short period of time [7].

Scholars have performed extensive research on how slack resources influence enterprises’ technological innovation. According to Wei et al. (2020), slack resources in enterprises can be seized by managers as an informal way to provide resource support for enterprises’ innovation activities [8]. Through making flexible use of slack resources, enterprises can attempt innovation strategies so as to promote technological innovation. However, other scholars confirm that although some enterprises possess some slack resources, their technological innovations are still lacking resource support [9]. The above controversy stems from the insufficient consideration of the characteristics of different slack resources; the existing literature generally treats them as a whole without distinguishing between them [10]. Therefore, it is urgent to explore the relationship between different slack resources and corporate technological innovation. Moreover, in the modern business world, an enterprise will not survive without the external environment. Does the relationship between slack resources and corporate technological innovation change as the uncertainty of the external environment increases? At the same time, managers are the decision-makers of enterprise innovation activities, and their competencies play a critical role in the success of technological innovation. Do different managerial competencies influence the relationship between slack resources and enterprise technological innovation? Obviously, the existing literature does not provide answers to these questions.

2. Unabsorbed Slack Resources and Enterprise Innovation

Innovation requires a major expenditure of resources, and resource availability is the critical factor of innovation success [11]. The more resources an enterprise owns, the more autonomous it will be when pursuing market opportunities and the more likely it will be to make disruptive innovations [12]. However, R&D investment is different from the ordinary [13], with the characteristics of a large amount, a long cycle, and uncertain results [14]. Enterprises engaged in innovation are prone to the problem of insufficient funding for internal R&D [15]. Given the high adjustment costs of innovation activities [16], enterprises generally have a strong incentive to maintain a continuous level of innovation investment (innovation smoothing), which requires continuous and adequate financial support. Due to the positive externalities of innovation activities, innovative enterprises are usually unwilling to disclose information concerning innovation [17]. This makes it difficult for external capital providers to properly evaluate the real value of innovation projects, so they are naturally reluctant to lend funds to enterprises, leading to innovative enterprises facing serious financing constraints.

In this context, from the perspective of organization theory, as the abundant security resources of the enterprise [18], unabsorbed slack resources can provide important support for enterprises to take risks, make positive strategies and maintain a competitive edge. They can play a buffer role when enterprises face financing constraints: they provide relatively stable cash flow for enterprises' innovation activities, which can be effectively converted to maintain and restore enterprise productivity and help enterprises cope with the adverse impact from external environmental uncertainty and alleviate financing constraints in a timely manner. Thus, innovation activities can be carried out continuously [19], and the sustainability of R&D investment and innovation output of innovation activities can be maintained. On the other hand, unabsorbed slack resources are of high liquidity, which means lower adjustment costs. When enterprises face financing constraints, they can increase financial flexibility by appropriately reducing unabsorbed slack resources to seize opportunities from environmental changes. This helps organizations to innovate in uncertain external situations, try new strategic changes and innovation activities, keep enterprise innovation ability [4], and build innovation atmosphere [20]. Finally, the fluctuation of investment in enterprise innovation is relatively flat compared with the negative shock of cash flow. Therefore, unabsorbed slack resources increase innovation resources to a certain extent and smooth part of the fluctuation of innovation activities due to financing constraints.

However, an enterprise has an expectation of the number of slack resources [21], which may be affected by industry environment, internal operation efficiency, and other aspects of the enterprise. From the perspective of agency theory, when the actual number of slack resources is greater than expected, enterprises tend to search and seize external opportunities to consume these resources, inducing "opportunity searching" behavior to restore the number of slack resources to the expected level. This often leads to the phenomenon that slack resources spawn the irrational use of resources, considered by the agency theory [22], such as the expansion of management rights and excessive investment. They even lead to the shareholder who holds most of the enterprise's equity to transfer the enterprise's property and other resources for their own interests, namely the large shareholder tunneling. The large shareholder tunneling directly damages the interests of minority shareholders and the enterprise's future growth opportunities, which is not conducive to the enterprise's future investment in innovation activities. In addition, excessive slack resources are synonymous with "low efficiency" of enterprises [23], indicating that enterprises lack initiative in trying innovative breakthroughs. As a result, when there are too many unabsorbed slack resources, the enterprise's innovative activities suffer.

3. Unabsorbed Slack Resources, Environmental Uncertainty, and Enterprise Innovation

Environmental uncertainty is the complexity of changes in an organization's external environment and stands for the organization's responsiveness [24]. Specifically, environmental uncertainty is measured by the degree of change in the external environment in terms of "technology, customer preference, and product demand or material supply" [25]. A complex external environment will put huge pressure on the enterprise. The higher the uncertainty of the environment, the faster the change of the external environment, and the higher management risk that the enterprise faces, the more urgent it becomes for enterprises to respond quickly to changing circumstances [26].

In modern commercial society, an enterprise cannot survive without the external environment, and environmental factors need to be taken into account while making decisions. When the external environment is unpredictable, enterprises face increased operational risks [27], which makes their decision-making more cautious. As a consequence, enterprises must manage the scarce resources they possess. Unabsorbed slack resources are used to maintain and restore the productivity of enterprises. Moreover, they are transformed into marketing and other business and management activities, even into absorbed slack resources. Because absorbed slack resources are internalized in the enterprises' business management activities, they are not flexible and have the characteristics of "low efficiency or even waste" in the view of

agency theory, leading directly to the gap between the actual output and the maximum output of the enterprise innovation activities.

Additionally, in the dynamic environment of environmental uncertainty, the information obtained from the outside is characterized by limited, lagging, and lower accuracy. This characteristic makes managers face decision fuzziness and affects their ability to judge the future [28]. According to social learning theory, this high level of environmental uncertainty can trigger a “herd effect,” whereby management tends to adopt imitation strategies to reduce costs [29] and is more likely to adopt conservative strategies to maintain cash flow and reduce R&D investment. Therefore, when other factors are equal, the higher the degree of environmental uncertainty, the fewer unabsorbed slack resources will be applied to the maintenance of enterprise innovation, leading to a reduction in innovation input and output.

4. Unabsorbed Slack Resources, Managerial Ability, and Enterprise Innovation

Managers are some of the most important stakeholders in modern enterprises. The ability of managers to generate revenue under resource constraints is called “managerial ability” [30]. According to upper echelon theory, the ability of management, as an important human capital, is a critical factor for innovation success. However, at present, the relationship between managerial ability and enterprise innovation is equivocal [31].

As an effective way for enterprises to obtain and maintain their competitive advantages, innovation has the characteristics of high risk, long cycle, and high investment, making it an uncertain decision for management [32]. There are two opposing views on how managerial ability influences enterprise innovation [31]. Some scholars argue that managerial ability has a positive impact on enterprise innovation. From the risk tolerance perspective, strong managers are competent in risk control, resource integration, opportunity discovery, and learning skills [33] and are more likely to invest in high-risk projects, that is, a certain degree of risk taking. A high level of risk-taking contributes to improving innovation performance and to pursuing high-risk innovation projects [34]. Simultaneously, competent managers are more experienced in managing the enterprise’s resources. Through strong ability of resource integration and allocation, enterprises can improve risk-tolerance, leverage unabsorbed slack resources, and better execute innovation projects [35]. In addition, more competent management can stimulate researchers to realize their full creative potential, thereby providing the most valuable human resources for innovation and improving innovation performance.

Contrarily, other scholars hold that managerial ability has a negative impact on innovation [36]. Based on the principal-agent theory, due to information asymmetry, the manager tends to avoid risk in investment decision-making out of personal self-interest rather than “organizational benefits maximization.” The more competent a manager is, the more likely he or she will benefit from avoiding venture capital [37]. The agency problem causes slack resources to be regarded as a tool for managers to achieve their personal goals, and managers are prone to resource satisfaction, which in turn weakens the incentive to innovate and reduces the R&D investment [38]. Additionally, based on the management defense theory and reputation theory, the absence of constraints in the internal and external governance structure makes managers with strong competencies focus more on their reputation and future career development; therefore, they will avoid high-risk projects, take a more conservative approach to resource use, and reduce innovation [36]. Additionally, the way in which enterprises reduce agency costs by executive stockholding brings a certain convergence effect and further leads to a management defense effect [39]. The stronger the managerial ability one has, the more serious the defense effect is; when the equity incentive exceeds a certain range, the higher power and managerial ability means the higher residual income claim, and this will have a much stronger “tunneling” motivation for a large number of unabsorbed slack resources [40] and reduce investment in long-term projects, such as enterprise innovation.

References

1. Devece, C.; Peris-Ortiz, M.; Rueda-Armengot, C. Entrepreneurship during economic crisis: Success factors and paths to failure. J. Bus. Res. 2016, 69, 5366–5370.
2. Kahn, K.B. Understanding innovation. Bus. Horizons 2018, 61, 453–460.
3. Peters, M.; Schneider, M.; Griesshaber, T.; Hoffmann, V.H. The impact of technology-push and demand-pull policies on technical change—Does the locus of policies matter? Res. Policy 2012, 41, 1296–1308.
4. Cyert, R.; March, J.G. A Behavioral Theory of the Firm; Prentice-Hall: New York, NY, USA, 1963.
5. Voss, G.B.; Sirdeshmukh, D.; Voss, Z.G. The effects of slack resources and environmental threat on product exploration and exploitation. Acad. Manag. J. 2008, 51, 147–164.

6. Suzuki, O. Enabling or constraining? Unraveling the influence of organizational slack on innovation. Ind. Corp. Change 2018, 27, 555–575.
7. Latham, S.F.; Braun, M.R. The Performance Implications of Financial Slack during Economic Recession and Recovery: Observations from the Software Industry (2001–2003). J. Manag. Issues 2008, 20, 30–50.
8. Wei, Y.; Nan, H.X.; Wei, G.W. The impact of employee welfare on innovation performance: Evidence from China's manufacturing corporations. Int. J. Prod. Econ. 2020, 228, 107753.
9. Camison, C.; Villar-Lopez, A. Organizational innovation as an enabler of technological innovation capabilities and firm performance. J. Bus. Res. 2014, 67, 2891–2902.
10. Natividad, G. Financial Slack, Strategy, and Competition in Movie Distribution. Organ. Sci. 2013, 24, 846–864.
11. Hall, B.H.; Mairesse, J. Exploring the relationship between R&D and productivity in French manufacturing firms. J. Econom. 1995, 65, 263–293.
12. Du, J.; Zhang, J.; Li, X. What is the mechanism of resource dependence and high-quality economic development? an empirical test from china. Sustainability 2020, 12, 8144.
13. Guellec, D.; Van Pottelsberghe De La Potterie, B. The impact of public R&D expenditure on business R&D. Econ. Innov. New Technol. 2003, 12, 225–243.
14. Leung, T.Y.; Sharma, P. Differences in the impact of R&D intensity and R&D internationalization on firm performance–Mediating role of innovation performance. J. Bus. Res. 2021, 131, 81–91.
15. Gassmann, O.; Von Zedtwitz, M. New concepts and trends in international R&D organization. Res. Policy 1999, 28, 231–250.
16. Li, X.; Long, H. Research focus, frontier and knowledge base of green technology in china: Metrological research based on mapping knowledge domains. Pol. J. Environ. Stud. 2020, 29, 3003–3011.
17. Huang, J.; Xie, P.; Zeng, Y. The Effect of Corporate Social Responsibility on the Technology Innovation of High-Growth Business Organizations. Sustainability 2021, 13, 7286.
18. Sun, Y.; Du, S.; Ding, Y. The Relationship between Slack Resources, Resource Bricolage, and Entrepreneurial Opportunity Identification—Based on Resource Opportunity Perspective. Sustainability 2020, 12, 1199.
19. DanieleAmore, M.; Schneider, C.; Žaldokas, A. Credit supply and corporate innovation. J. Financ. Econ. 2013, 109, 835–855.
20. Tan, J.; Peng, M.W. Organizational Slack and Firm Performance during Economic Transitions: Two Studies from an Emerging Economy. Strateg. Manag. J. 2003, 24, 1249–1263.
21. March, J.; Shapira, Z. Managerial Perspective on Risk and Risk Taking. Manag. Sci. 1987, 33, 1404–1418.
22. Morrow, J.L.; Sirmon, D.G.; Hitt, M.A.; Holcomb, T.R. Creating value in the face of declining performance: Firm strategies and organizational recovery. Strateg. Manag. J. 2007, 28, 271–283.
23. De Vita, G.; Li, C.; Luo, Y. The inward FDI-Energy intensity nexus in OECD countries: A sectoral R&D threshold analysis. J. Environ. Manag. 2021, 287, 112290.
24. Wong, C.Y.; Boon-Itt, S.; Wong, C. The contingency effects of environmental uncertainty on the relationship between supply chain integration and operational performance. J. Oper. Manag. 2011, 29, 604–615.
25. Chan, H.K.; Yee, R.W.; Dai, J.; Lim, M.K. The moderating effect of environmental dynamism on green product innovation and performance. Int. J. Prod. Econ. 2016, 181, 384–391.
26. Prasad, B.; Junni, P. Understanding top management team conflict, environmental uncertainty and firm innovativeness Empirical evidence from India. Int. J. Confl. Manag. 2017, 28, 122–143.
27. Safi, A.; Chen, Y.; Wahab, S.; Zheng, L.; Rjoub, H. Does environmental taxes achieve the carbon neutrality target of G7 economies? Evaluating the importance of environmental R&D. J. Environ. Manag. 2021, 293, 112908.
28. Barker, V.L.; Mueller, G.C. CEO characteristics and firm R&D spending. Manag. Sci. 2002, 48, 782–801.
29. Giachetti, C.; Torrisi, S. Following or Running Away from the Market Leader? The Influences of Environmental Uncertainty and Market Leadership. Eur. Manag. Rev. 2017, 15, 445–463.
30. Demerjian, P.; Lev, B.; Mcvay, S. Quantifying Managerial Ability: A New Measure and Validity Tests. Manag. Sci. 2012, 58, 1229–1248.
31. Chen, Y.Y.; Podolski, E.J.; Veeraraghavan, M. Does managerial ability facilitate corporate innovative success? J. Empir. Financ. 2015, 34, 313–326.

32. Becker, W.; Dietz, J. R&D cooperation and innovation activities of firms—Evidence for the German manufacturing industry. Res. Policy 2004, 33, 209–223.
33. Zacher, H.; Rosing, K. Ambidextrous leadership and team innovation. Leadership Org. Dev. J. 2015, 36, 54–68.
34. Andreou, P.C.; Philip, D.; Robejsek, P. Bank Liquidity Creation and Risk-Taking: Does Managerial Ability Matter? J. Bus. Finance Acc. 2016, 43, 226–259.
35. Lee, C.C.; Wang, C.W.; Chiu, W.C.; Tien, T.S. Managerial ability and corporate investment opportunity. Int. Rev. Financ. Anal. 2018, 57, 65–76.
36. Hirshleifer, D.; Low, A.; Teoh, S.H. Are Overconfident CEOs Better Innovators? J. Financ. 2012, 67, 1457–1498.
37. Narayanan, M.P. Managerial Incentives for Short-Term Results. J. Financ. 1985, 40, 1469–1484.
38. Love, E.G.; Nohria, N. Reducing slack: The performance consequences of downsizing by large industrial firms. Strateg. Manag. J. 2005, 26, 1087–1108.
39. Cheng, S. R&D Expenditures and CEO Compensation. Account. Rev. 2004, 79, 305–328.
40. Cheng, M.Y.; Liu, J.; Zhang, L.W. Tunneling through allies: Affiliated shareholders, insider trading, and monitoring failure. Int. Rev. Econ. Financ. 2020, 67, 323–345.

Retrieved from https://encyclopedia.pub/entry/history/show/51934