Research Article

Resilience and Recovery of Albay's Food Services in the Post-Pandemic Era

Jason L. Abrera*

College of Business Economics & Management Bicol University, 4501, Philippines

ABSTRACT

The COVID-19 pandemic significantly disrupted the food services sector across the Philippines, with localized industries such as those in Albay Province facing unprecedented challenges. This study examines the recovery dynamics of Albay's food services sector in the post-pandemic era using a descriptive quantitative approach. Business profiles were analyzed in terms of employee count, capital investment, and modes of operation (dine-in, take-out, delivery, catering), revealing a predominance of micro-enterprises (77.05%) and limited capital resources. Despite minimal government support, food service establishments demonstrated strong resilience through adaptive strategies, most notably, the adoption of advanced digital tools. The study found high uptake of e-commerce platforms (94.26%), online delivery systems (81.97%), and universal implementation of digital payments and marketing strategies (100%). Financial recovery was also bolstered by private loans (24.59%), primarily bank-based. Survey data indicate that businesses achieved full recovery across key dimensions including operational efficiency, customer loyalty, financial stability, and employee retention. These findings show the industry capacity for innovation and adaptation despite the institutional gaps. The study recommends for the continued investment in technology, instruction and assistance using digital tools, and improve online payment systems to sustain the growth and ensure preparedness against the future disruptions.

Keywords: *Food services, Post-pandemic, Government support, Resilience, Full recovery, Financial stability, COVID-19*

Background

The COVID-19 pandemic changed consumer behavior and economic systems, bringing significant challenges for global business sectors. Significant disruptions were caused by government restrictions and lockdowns, especially in the travel and hospitality industries. Bans on international travel almost caused tourism revenues to decrease and hotels had financial difficulties, weak occupancy rates, and a labor shortage as a result of the economic crisis (Yang et al., 2021; Özdemir et al., 2021). On the opposite hand, other industries demonstrated resiliency. MSMEs managed to withstand the

crisis due to the food and beverage industry's adaptation, which involved a shift to digital marketing and online sales (Putra et al., 2022). Similar to this, the demand for remote work and distance learning increased, speeding up technology advancements and forcing businesses to develop new business strategies (Lü et al., 2021; Švábová & Kramárová, 2022).

Some industries experienced significant setbacks, while others were able to change course. Manufacturing SMEs suffered significant losses as a result of supply chain interruptions (Juergersen et al., 2020). Travel restrictions and remote operations have a major influence on the aviation industry, particularly Boeing, making recovery and logistics more difficult (Shi et al., 2022). In turn, business recovery turned into a challenging process that called for resilience-building and strategic adaptation. To lessen economic disruptions, research highlights the value of stakeholder collaborations, risk assessments, and pre-disaster preparation (Sulhaini et al., 2023; ALADAĞ, 2024). Effective recovery strategies are further shaped by past crisis experiences, enhancing organizations' capacity to recover (Flynn, 2007).

Effective financial management is essential for career rehabilitation. Stabilizing small enterprises and facilitating investment in recovery initiatives depend heavily on having access to financing and financial help (Marshall & Schrank, 2020). Another important factor that contributes to resilience is technology. According to Cloud Business Continuity and Disaster Recovery Strategies (2023), cloud-based disaster recovery solutions provide data security and business continuity in the event of disruptions. Additionally, combining disaster recovery planning with business continuity planning (BCP) offers a thorough approach to risk management, protecting IT systems and operational procedures (Filipović et al., 2018; Sahebjamnia et al., 2018).

The pandemic highlights the necessity for governments, the banking industry, and digital companies to work together. Lockdowns and financial assistance programs were implemented by governments in response, although their efficacy differed based on regional economic circumstances (Warsono et al., 2023;

Zhong, 2023). Governments and financial institutions worked together to enact stimulus plans that benefited both persons and companies (Kumajas et al., 2022). In the meantime, technology was crucial for handling economic and public health changes. Artificial intelligence forecasted infection trends and addressed misinformation, while digital mobile technologies made contact tracing and telehealth services easier (Demuyakor & Geng, 2022; Nguyen et al., 2021). In order to enhance project management and safety compliance, the construction sector also incorporated digital technologies such as BIM (Fatimah et al., 2023; Maha & Stoian, 2022).

Among of the sectors hardest hit were the food services sector, which experienced changes in customer behavior, distribution, and production. Food insecurity increased as a result of labor shortages, industry closures, and logistical difficulties that restricted food availability (Llanos-Soto et al., 2021; Wahdat & Lusk, 2022). Recovery tactics included using blockchain for food traceability, automation in distribution centers, and digital technologies for supply chain efficiency (Burgos & Ivanov, 2021; Iftekhar & Cui, 2021). Addressing food instability and enforcing food safety laws continue to be top concerns, especially for those with limited resources (Radulovic et al., 2022; Jafri et al., 2021). In line with this focus, this study will examines how food service businesses in Albay are recovering post-pandemic, focusing on business profiles, key recovery factors, and current recovery levels to provide insights that enhance resilience and sustainability.

Methods

This study used a descriptive quantitative approach to address the resilience and recovery of the food services sector in the Province of Albay. Descriptive quantitative research is a methodological approach that focuses on summarizing and presenting data in numerical form to provide clear and accurate results of a phenomenon.

Survey questionnaires were utilized to gather quantitative data regarding the business profile of food services. This survey was conducted with a representative sample of food service establishments across the province. A

total of 122 food service establishments were selected as respondents, representing micro, small, and medium enterprises (MSMEs) operating in urban and rural areas. It focused on variables such as the number of employees, investments, and nature of operations (including takeout, delivery, and food service). This quantitative method aimed to provide numerical insights into the operational aspects of the food service industry.

The selection criteria included establishments that had been operational for at least one year prior to pandemic and remained active during the post-pandemic period. A total enumeration approach was employed, wherein all food service establishments in Albay that met the criteria, operational for at least one year prior to the pandemic and active during the post-pandemic period, were invited to participate in the survey. This ensured comprehensive coverage and minimized sampling bias.

The survey collected data on the following key areas, Number of Employees, to understand the employment scale of each establishment. Capital Investment, to gauge the financial commitment involved in setting up and running the business. And, Nature of Operation, to determine the types of services offered like dine-in, take-out, delivery, and catering services.

By focusing on these variables, this study generated a comprehensive profile of the food services sector in Albay. In addition, the survey included questions that is related to government support, financial access, and technological strategies, which are believed to influence the recovery process.

Data collection was conducted over a three-month period, allowing sufficient time to reach diverse respondents and ensure data reliability. To ensure the reliability of the survey instrument, the questionnaire underwent review by professionals in business research. Necessary adjustments were made based on feedback before full deployment.

The collected data was analyzed using descriptive statistical techniques to summarize and interpret the findings. This approach helped in identifying trends, patterns, and relationships between the variables, providing a clear picture of the current state and recovery levels within the food services sector.

Result and Discussion

This study discussed the resilience and recovery of food service businesses in the Province of Albay in the post-pandemic era. The findings show key insights into business profiles, financial strategies, technological adoption, and the levels of recovery.

Table I. Number of Employees

Size Category	Range	Frequency Count	Percentage
Micro	1 to 9 employees	94	77.05
Small	10 to 99, 100-199 and 200 or more employees	28	22.95
Total		**122**	**100**

Table II. Capital Investment

Capital Investment	Frequency Count	Percentage
Less than Php 3,000,000	105	86.07
Php 3,000,001- Php 15,000,00	17	13.93
Total	**122**	**100**

Table III. Nature of Operation

Nature of Operation	Frequency Count	Percentage
With delivery services aside from the basic Dine in and Take Out	98	80.33
With catering services aside from the basic	17	13.93

Nature of Operation	Frequency Count	Percentage
Dine in and Take Out		
Basic services (Dine in and take out)	7	5.74
Total	**122**	**100**

The food service industry can be characterized as micro-enterprises in Albay since at least 77.05% of the respondents have an investment lower than three million pesos. This suggests that, the food and service industry is mainly comprised of micro-enterprises. Albay is dominated by individual or small family-owned businesses, lacking investment. Most likely, the micro-enterprises Albay's food and service industry have lower than average investments, which can impact their strategies and resource allocation. Also, the majority of 80.33% businesses, provide delivery services alongside dine-in and take-out, reflected a significant trend towards convenience and accessibility in the food service industry.

Even with limited government aid, amounting to 74.59% with no assistance provided, a notable number of businesses sought private funding, with 24.59% of them securing loans, chiefly from banks. This aligns with the findings of Belitski et al. (2021), which reported the most prevalent forms of government aid to be funding, through direct grants, loans, or wage subsidies. It also aligns with the findings of Ojo et al. (2021) who argued that MSMEs are able to utilize their inherent agile nature to pivot and adapt to market shifts. For example, businesses that embraced digital transformation through online marketing and e-commerce during the pandemic were able to survive at a higher rate than those who did not. This flexibility is critical as businesses strive to serve an accomplished a growing base of customers using online platforms. However, social support, self-efficacy, and coping strategies in relation to maintaining productivity during a crisis are essential to self-recovery. This indicates that businesses have the ability to recover independently in the absence of government support, provided that strong innovation and internal resilience exists.
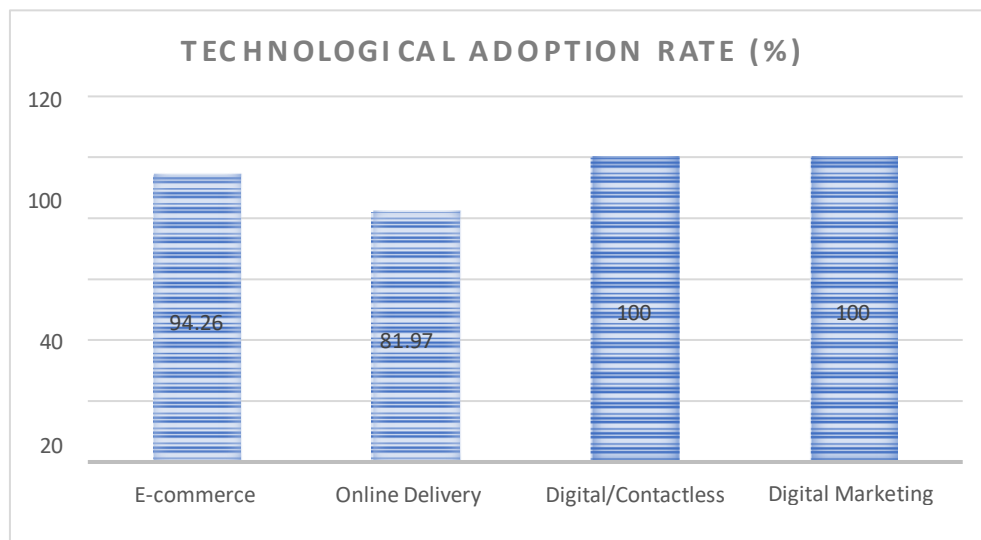

Figure 1. Technological Adoption

The entire industry embraced technological strategies, which displays a considerable move towards a complete digital transformation. These tools were essential for operations and customer engagements pre, during, and post-pandemic. This aligns with the findings of Simões et al. (2021) which emphasize the fast shift towards digital technology during the pandemic, driven by the need to streamline business activities and operations.

Table IV. Levels of Recovery

Aspect	Weighted Mean	Interpretation
Financial Stability		
Profitability	4	Full Recovery
Liquidity	4	Full Recovery
Solvency	4	Full Recovery
Cash Flow	4	Full Recovery
Investments	4	Full Recovery
Customer Loyalty		
Repeat purchases	4	Full Recovery
Positive word-of-mouth	4	Full Recovery
Engagement with loyalty programs	4	Full Recovery
Operational Efficiency		
Marketing	4	Full Recovery
Production	4	Full Recovery
Resource Utilization	4	Full Recovery
Supply Chain	4	Full Recovery
Inventory Management	4	Full Recovery
Employee Retention		
Stable workforce	4	Full Recovery
Reduced Attrition	4	Full Recovery
Retention Initiative	4	Full Recovery

Legend: No Recovery (1); Initial Recovery (2); Mid-Term Recovery (3); and Full Recovery (4)

After the pandemic, Albay's food service enterprises showed complete recovery in a number of important areas. This suggests that companies have successfully recovered their financial stability, demonstrating sound post-pandemic financial health and management techniques. The findings of Sangeetha et al. (2022) who highlighted the significance of internal financial management for recovery, validate this resilience.

Everything points to a complete recovery in terms of customer loyalty. This suggests that businesses have been able to keep their customers loyal, which is essential for long-term to grow a business. According to Jun et al. (2021), social influence and trust are crucial for customer participation in times of crisis.

Marketing, production, supply chain, inventory management, and resource usage are all operational efficiency variables with a weighted mean of four, which is considered full recovery. This suggests businesses have successfully returned to their pre-disaster operational procedures, guaranteeing effective supply chain and resource management. This implies that businesses have restored their operational processes to pre-disaster levels, ensuring efficient management of resources and supply chains. Chen and Biswas (2021) also highlighted the role of digital technology in enhancing operational efficiency and resilience during crises.

For employee retention, stable workforce, reduced attrition, and retention initiatives have weighted means of four, all interpreted as full recovery. This implies that businesses have managed to retain a stable workforce, which is needed for a consistent operation and to reduced turnover costs. The importance of human capital management in recovery is echoed by Hadjielias et al. (2022), who discussed the critical role of employee retention strategies in business resilience.

Overall, this interpretation indicates a comprehensive recovery across financial stability, customer loyalty, operational efficiency, and employee retention. This widespread recovery implies that the businesses have not only sur-

vived but thrived the post-pandemic, demonstrating strong adaptability and effective crisis management strategies. These findings show the importance of adaptive strategies, technological adoption, and a huge internal and external management practices in achieving full recovery, as supported by the literature reviewed.

Conclusion

Micro-enterprises make up the majority of the food service sector in the Province of Albay, and the majority of these businesses report making just small capital investments. The fact that most of these businesses provide delivery services shows how the post-pandemic environment has clearly shifted toward ease, accessibility, and digital responsiveness.

Only a small percentage of enterprises sought private finance, with bank loans being the favored choice, despite the lack of government support. Nearly all firms adopted digital and contactless payment methods, adopted digital marketing tactics, and actively participated in online delivery and e-commerce, demonstrating the widespread use of technology.

The study found that businesses demonstrated full recovery across key dimensions, including financial stability, customer loyalty, operational efficiency, and employee retention. This recovery was evident in both internal operations and external customer engagement.

Recommendations

1. Invest in advanced technology. Within the next 12 months, companies should upgrade their digital technology with at least 5% of their yearly operating expenditure. To increase client reach and boost productivity, this entails upgrading online delivery systems, e-commerce platforms, and implementing two or more new digital marketing tools.
2. Instruction and assistance using digital tools. Beginning in the first quarter of the next fiscal year, conduct quarterly training sessions for staff members on the use of digital platforms and technologies. Post-training evaluations should be used for every session to make sure that at least 80% of participants show increased competency.
3. Improve online payment systems. By the end of Q2, introduce at least two contactless payment methods (such as mobile wallets and QR-based systems), and encourage their use via monthly customer engagement initiatives. To guarantee a 30% rise in the use of digital payments in six months, monitor adoption rates.

Acknowledgement

References

ALADAĞ, M. (2024). *Pre-disaster planning and resilience building in SMEs: A longitudinal analysis*. Journal of Business Continuity, 18(1), 55–70.

Belitski, M., Desai, S., & Golubeva, N. (2021). "Research on entrepreneurship in the era of COVID-19: Implications for policy and practice." Journal of Business Research, 130, 6-19. DOI: 10.1016/j.jbusres.2021.02.053

Burgos, D., & Ivanov, D. (2021). *Food retail supply chain resilience and the COVID-19 pandemic: A digital transformation perspective*. Transportation Research Part E: Logistics and Transportation Review, 152, 102412.

Chen, Y., & Biswas, M. I. (2021). Turning crisis into opportunities: How a firm can enrich its business operations using artificial intelligence and big data during COVID-19.

Sustainability, 13(22), 12656. https://doi.org/10.3390/su132212656

Cloud Business Continuity and Disaster Recovery Strategies. (2023). *Best practices for cloud- based resilience during disruption*. CloudTech Insights, 11(2), 87–99.

Demuyakor, J., & Geng, Y. (2022). *Artificial intelligence and mobile technology as pandemic control tools: A review of trends and ethical implications*. International Journal of eHealth Technologies, 10(4), 213–228.

Fatimah, N., Yusuf, S., & Putra, I. K. (2023). *Digital innovation in construction: BIM adoption and post-pandemic project management*. Engineering Management Review, 35(2), 122–134.

Filipović, V., Simić, D., & Tomašević, Z. (2018). *Integrating business continuity and disaster recovery in SMEs: A systematized approach*. Journal of Risk and Resilience, 6(3), 198–210.

Flynn, B. (2007). *Learning from crisis: Historical insights for business recovery planning*. Business Horizons, 50(6), 439–446.

Hadjielias, E., Christofi, M., & Tarba, S. (2022). Contextualizing small business resilience during the COVID-19 pandemic: A dynamic capabilities perspective. Entrepreneurship & Regional Development, 34(3–4), 210–233. https://doi.org/10.1080/08985626.2021.1880976

Iftekhar, M. S., & Cui, Y. (2021). *Blockchain in the food supply chain during COVID-19: Transparency and traceability for resilience*. International Journal of Logistics Management, 32(1), 169–186.

Jafri, A., Khan, A., & Memon, R. (2021). *Addressing food insecurity during the pandemic: Government responses and policy gaps*. Food Policy Journal, 46(2), 78–95.

Juergersen, J., Guimón, J., & Narula, R. (2020). *European SMEs amid COVID-19: Vulnerabilities and strategic responses*. Journal of Industrial and Business Economics, 47(3), 499–510.

Jun, M., Palacios, S., & Moon, H. (2021). Effects of service quality and customer satisfaction on loyalty of bank customers. International Journal of Quality and Service Sciences, 13(3), 389–406.

https://doi.org/10.1108/IJQSS-03-2020-0034

Kumajas, R., Sondakh, J., & Montolalu, R. (2022). *Bank and government collaboration in SME recovery: A case study during COVID-19*. Journal of Financial Institutions, 15(1), 101–112.

Llanos-Soto, M., Herrera, C. A., & Tobar-Benítez, W. (2021). *COVID-19 and food supply chain disruption in Latin America: Mapping the vulnerabilities*. Food Security Review, 13(2), 215–231.

Lü, Y., Zhu, D., & Wang, X. (2021). *Technology-led business model transformation in remote work and education: Post-pandemic acceleration*. Technological Forecasting and Social Change, 168, 120794.

Maha, L., & Stoian, M. (2022). *BIM in post-pandemic construction: Reimagining safety and compliance*. Journal of Construction Technology, 27(1), 43–57.

Marshall, M. I., & Schrank, H. L. (2020). *The financial resilience of small businesses during economic disruption: Access to credit and beyond*. Journal of Small Business Strategy, 30(1), 56– 70.

Nguyen, N. T., Nguyen, T. P., & Vu, T. T. (2021). *AI-driven tools in pandemic response: Contact tracing and misinformation control*. Healthcare Informatics Review, 9(3), 134–146.

Ojo, A., Fawehinmi, O., & Yusliza, M. (2021). Examining the predictors of resilience and work engagement during the covid-19 pandemic. Sustainability. https://doi.org/10.3390/su13052902

Özdemir, A., Şahin, E., & Hacıoğlu, N. (2021). *Impact of COVID-19 on tourism and hospitality: Evidence from Turkey*. Journal of Tourism Research, 28(4), 94–108.

Putra, R. D., Wibowo, A., & Handayani, D. (2022). *Digital transformation of MSMEs in Indonesia during the pandemic*. Journal of E-Commerce and Development, 19(2), 76–89.

Radulovic, D., Vujovic, S., & Kostic, B. (2022). *Strengthening food safety governance post- COVID-19: Regulatory gaps and strategic priorities*. International Food Policy Journal, 34(3), 117–130.

Sangeetha, M., Thandava, S., Soshte, R. A., & Aggarwal, P. A. (2022). The emerging role of business management for sustainable development in developing economies. World Journal of Management and Economics, 15(2), 84–93

Sahebjamnia, N., Hajiagha, S. H. R., & Seifi, A. (2018). *Integrated business continuity and disaster recovery planning: A game-theoretic framework*. International Journal of Production Research, 56(9), 3209–3223.

Simões1, Ferreira2, Castro3 et al. 20212021 IEEE 19th International Conference on Industrial Informatics (INDIN)

Shi, Y., Su, B., & Yang, R. (2022). *The pandemic's toll on global aviation: Logistics challenges and Boeing's strategic responses*. Journal of Transportation Economics, 40(2), 203–220.

Sulhaini, N., Prabowo, H., & Lestari, I. (2023). *Stakeholder collaboration for SME resilience: Lessons from disaster risk reduction*. Journal of Strategic Disaster Management, 12(1), 45–63.

Švábová, L., & Kramárová, K. (2022). *Business model innovation in response to COVID-19: Insights from the education sector*. Management & Marketing Challenges, 17(1), 34–50.

Warsono, T., Jannah, M., & Risanto, A. (2023). *Government interventions and SME recovery: Comparative analysis across Southeast Asia*. Policy and Economics Quarterly, 26(1), 65–81.

Yang, L., Zhang, Q., & Li, J. (2021). *COVID-19 and its impact on hospitality businesses in China: A quantitative assessment*. Hospitality Management Studies, 38(2), 58–73.

Zhong, H. (2023). *COVID-19 stimulus effectiveness in Asian economies: A case study approach*. Regional Economic Recovery Journal, 21(1), 88–104