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Resilient business models in times of war and pandemic: Lessons from Ankor pharm

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Abstract

Against the backdrop of a compounding crisis like war and pandemic, businesses have not had it so difficult before and thus require resilience, the ability to adapt, and be in tune with society. An example of such an adaptive business model is Ankor Pharm, a pharmaceutical chain operating in Odesa, Ukraine, a country adversely affected by the course of the war in Ukraine. Since its inception in 2003, the establishment has integrated quality control, service-driven innovation, functional flexibility, and access to the community to support business continuity during the war.

Based on the information provided on the web resource www.ankor.od.ua and using such theoretical concepts as dynamic capabilities and supply chain resilience, this paper comments on the ability of Ankor Pharm to respond to disruption and continue providing services and generating trust. Through certified qualities of supply chains, socioeconomic addition program, 24/7 with delivery, in-house, and community-oriented services, Ankor Pharm provides an extensive business model in crisis-affected situations. The article is informative to the firms which intend to gain a balance between efficiency, resilience and social responsibility in a volatile environment.

Keywords: Business Resilience; Pharmaceutical Supply Chain; Dynamic Capabilities; Crisis Management; Customer-Centric Innovation

1. Introduction

Living in the time of compounding global crises, including the still-raging war in Ukraine and the long-term consequences of the COVID-19 pandemic, business has to set up against unprecedented challenges that push their operating, strategic, and societal stability to the limit. Such interference caused by the interruption of supply chains, economic instabilities, and limited mobility requires flexible business models that can support the base business operations in response to the new demands posed by the society (Chowdhury et al., 2021). Such shocks are especially devastating to the pharmaceutical industry, which is essential to the well-being of the population, because access to quality drugs and medical care proves a life-saving measure during wars and outbreaks (Bastani et al., 2021). A good example of a resilient business model that has managed to tackle such complexity is the Ankor Pharm with a network of pharmacies in Odesa, Ukraine as elucidated on the webpage.

The current strategy of Ankor Pharm is based on the concept of dynamic capabilities that focus on the capability of a firm to sense, seize, and transform resources in a turbulent environment (Teece et al., 1997). Their plans are consistent with the academic thought of supply chain resilience that indicates the significance of sustaining productivity with the resilience of supply chain management (Ivanov, 2020; Luckuer et al., 2024). With the sustainability of certified supply chains, implementation of socioeconomic bonus program, access to 24/7 systems with the delivery services, and community trust extended by the virtue of value added services, Ankor Pharm makes sure that its business operation is sustainable, but also enables the company to appear as a social network of health. Such an introduction positions a

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thorough examination of the Ankor Pharm practices that relies solely on the structure of their operations and within the situation as theorized by presented references, in order to discover the practical implications of study that can be applied by any enterprise in volatile context (Eisenhardt, 1989; Fiksel, 2017).

2. Literature review

The imminent meeting of international crises, including war and pandemics, have greatly caused immorals in business operations especially in very important industries like the pharmaceutical sector where continuity in provision of goods and services is essential to the well being of society. The current situation in Ukraine and the aftermath of the COVID-19 pandemic on the global economy have revealed fragilities in the supply chains, the stability of the financial system, and the healthcare system that need to be addressed by the robust business models that can still operate in the volatile environments (Chowdhury et al., 2021). In this case, resilience implies the ability of a firm to foresee, adapt, and recover after suffering disruptions without inflicting interruption to operations and loss of trust by the stakeholders (Fiksel, 2017). This literature review compiles academic research on business resilience in the context of pharmaceutical supply chains and projected on the case of Ankor Pharm, a network of pharmacies in in Odesa, Ukraine as outlined on the website. The incorporation of theoretical frameworks, including dynamic capabilities (Teece et al., 1997) and supply chain resilience (Ivanov, 2020), in the presented review situates the background of the analysis of Ankor Pharm strategies, providing a holistic perception of how companies can perform in the crisis environment.

2.1. Theoretical Prerequisites of Business Resilience

The idea of resilience in business has advanced beyond the perfection of operations to a systems-level that comprises of adaptability, agility as well as sustainability (Fiksel, 2017). According to Fiksel (2017), resilience is described as the capability of a firm to sustain the core functions under pressure and provides essential value to the managing of efficiency of operations and the engagement of stakeholders. This view is consistent with the theory of dynamic capabilities that state that companies should recognize the changes in the environment, exploit opportunities, and mobilize resources to become competitive in the turbulent environment (Teece et al., 1997). Dynamic capabilities come into play especially in a situation where a fast rearrangement of assets are vital in cases of survival such as the use of assets like supply chains or customer engagement strategy (Eisenhardt, 1989).

The pharmaceutical supply chains are essential in the public health; hence their resilience. Bastani et al. (2021) present a model of grounded theory of pharmaceutical resilience that includes such core aspects as trusted sourcing, stakeholder cooperation, and service adjustment. Such fundamentals play a crucial role in reducing the risks needed in case of war-related blockage or lack of supply due to the pandemic or other conditions that may affect access to medical supplies (Chowdhury et al., 2021). Ivanov (2020) also coined a concept of a viable supply chain, which presents an integration between agility (reacting fast to changes), resilience (resistance to disruptions), and sustainability (long-term stakeholder value). Within this framework, a tightrope walk between efficiency and redundancy needs to be found by firms, and effectively addressed in times of a crisis (Luck et al., 2024).

2.2. Challenges and Opportunities for Supply Chain for Crises

War and pandemic are distinct threats to the supply chain, such as logistics failure, regulatory changes, and increased demands. Chowdhury et al. (2021) performed systematic review of the research items on COVID-19 and its effects on supply chains including noticeable delays in imports, decreases in production capabilities, as well as cost increases. The results are especially applicable to Ukraine, whose interaction with cards has destroyed trade links and stretched logistics (Gereffi et al., 2022). According to Gereffi et al. (2022), resilience also depends on the localized production and close relationships with suppliers since they decrease the reliance on global value chains, which are affected by geopolitical shocks.

Luckner et al. (2024) also reiterate resilience versus efficiency trade-off by indicating that companies tend to focus on cutting costs during stable periods, therefore, being unprepared in case of a crisis. In their literature review, they have seen diversified sourcing, digital infrastructure and flexible operations as some of the strategies to overcome the disruptions. These measure/strategies correlate with the activities of Ankor Pharm, i.e., in-house productions and deliveries, reducing the level of external interdependence.

2.3. Customer-Centred Strategy and Social Capital

Customer engagement is a very important aspect of resiliency especially in a service-based industry such as the pharmaceutical industry. Braun and Clarke (2006) emphasize position of trust-building in the cases of service industries

because communication without concealment and emotional understanding creates loyalty. When the severe economic hardship and propaganda are overlaid with crises, customer-focused initiatives, lowering the financial and psychological load-including the introduction of loyalty programs or services, which can be enjoyed with equal access to everyone (Chowdhury et al., 2021). This kind of strategy is illustrated in the case of Ankor Pharm, where customers can use the points they have gained through the bonus program to avail medications even in the war-torn economy of Ukraine.

Social capital is also created as a result of community engagement that boosts resilience. According to Fiksel (2017), companies that are integrated into networks in the community better resist crises as they can use the concepts of trust and reciprocity. George and Bennett (2005) highlight the contribution of delivering information towards crisis management in that a firm that can deliver the information especially about the health-related information facilitates the relations between the stakeholders. These beliefs coincide with the free health services that Ankor Pharm provides, as well as the articles on its online blog.

3. Lack of Existing Literature

Although the sources show strong frameworks under resilience, there is a gap that has not been filled under transferring the concept to particular crisis situations such as war. They mostly concentrate on pandemics or economic shocks, without giving much concern to the peculiarities of conflict zones, namely, the inability to move or the destruction of infrastructure (Chowdhury et al., 2021; Gereffi et al., 2022). Also, very little is known of the incorporation of resilience practices in the operations, customers, and communities at a small to medium enterprise, such as Ankor Pharm. This article fills these gaps by carrying out an analysis of the practices of Ankor Pharm in a case study manner, based on the methodology presented by Eisenhardt (1989) to construct theoretical knowledge from the empirical data.

Aim

This paper intends to examine the business model of Ankor Pharm to discover the mechanisms of resilience under the fortification of war and COVID-19 other disruption forces, offering a theoretically sound guideline to companies operating in a crisis environment.

Objectives

- To analyse the quality assurance and its role in mitigating the supply chain risks in Ankor Pharm.
- To analyse the socioeconomic effects of the bonus program of the company Ankor Pharm as an innovation aimed at customer focus, resorting to the ideas of Braun and Clarke (2006) and Chowdhury et al. (2021).
- To assess how the 24/7 access and delivery services of Ankor Pharm adapts to operational conditions, it is possible to use Luckner et al. (2024) and Teece et al. (1997).
- To evaluate the significance of the in-house production and the presence of the professional staff to minimize the external dependency considering the recommendations provided by Gereffi et al. (2022).
- To discuss the concept of community engagement programs including free health services and online content at Ankor Pharm in the terms developed by Fiksel (2017) and George and Bennett (2005).
- To derive practical lessons out of these findings that businesses can use to deal with a crisis, employing a case study method (Eisenhardt, 1989).

4. Methodology

4.1. Research Design

In the current study, we apply a qualitative case study design in order to investigate the resilient business model of one of the largest networks of drug stores operating in Odesa, Ukraine, Ankor Pharm, during the crises of a war and a pandemic. Case study methodology recently described by Yin (2018) is closely associated with the investigation of a complex phenomenon in its natural setting and the in-depth investigation of how Ankor Pharm is dealing with disruptions. It can be done in accordance with the framework proposed by Eisenhardt (1989) of constructing the theories based on a case study, highlighting the importance of cycles of analysis in order to generate a generalizable knowledge using just one case. Selection of a single case study is supported by the fact that Ankor Pharm presents an interesting case and is managed in a form of a community driven network of pharmacies operating in the conflict zone and therefore the data is rich to study the resilience strategy (George & Bennett, 2005).

As the dynamic capabilities framework (Teece et al., 1997) and models of supply chain resilience (Ivanov, 2020; Lucker et al., 2024) have proven, they allow viewing the operational, customer-oriented, and community engagement strategies of Ankor Pharm through the prism of theoretical concepts. Only the official site of the pharmacist is used, which makes this data reliable and consistent with the instructions of the client to supply only the empirical material contained in the information given in the form of references. This methodological selection minimizes the bias of unverified sources and concentrates on self-reported practices of Ankor Pharm and explains them with the help of scholarly literature to promote methodological rigour of analysis.

4.2. Data Collection

The information used in the data collection was collected through a thorough review of the Ankor Pharms website, which was taken in July 2025 since the aim of the data collection exercise was to obtain details about the way that Ankor Pharms does its business. Their quality assurance processes, their bonus program, their operational principle, their in-house production, and their services to the community are barely discussed on the internet other than on the site and can be viewed as the main source of data. In line with Yin (2018) suggestion on case study research, the collected data becomes based on the systematic analysis of written and structural contents such as the description of the services, the involvement of the customers and the operational policies.

To guarantee completeness, a predetermined protocol (Table 1) advised the data to be taken gatherings which characterized the information based on the main dimensions of resilience that were discovered in the literature: quality assurance, customer-driven innovation, operational adaptability, internal capacity and engagement with the community (Bastani et al., 2021; Fiksel, 2017). Every part of the site has been checked several times to note several practices that can be found, such as the bonus scheme mechanics or the 24/7 service regime, so that all the strategies of Ankor Pharm are covered.

Table 1 Data Collection Protocol for Ankor Pharm’s Website Analysis

Resilience Dimension	Website Sections Analyzed	Data Extracted
Quality Assurance	“Why Us” (Territory of Quality)	Product certification, supplier partnerships, temperature-controlled logistics
Customer-Centric Innovation	“Bonus Program”	Bonus point system, redemption policies, transparency mechanisms
Operational Adaptability	“Why Us” (24/7 Operations, Delivery)	24/7 access, delivery services, online ordering functionality
Internal Capabilities	“Why Us” (Professionalism, In-House Production)	Staff training, in-house pharmaceutical production, individual order fulfillment
Community Engagement	“Additional Services,” “Useful Articles”	Free health services (blood pressure/weight measurement), health content provision

4.3. Data Analysis

The data analysis was executed in accordance with the order of a thematic analysis approach outlined by Braun and Clarke (2006) to discover the regularities and themes on the practices of Ankor Pharm that could be related to the resilience frameworks. It consisted of six steps as follows: (1) familiarisation with the data wherein the data is repeatedly read through an examination of the material at the website; (2) coding of initial ideas based on the dimensions of resilience (e.g., certified supply chain, customer loyalty incentives); (3) theme searching wherein codes are further separated into higher level categories (e.g., operational resilience, social capital); (4) checking themes against the data by reviewing the themes so identified; (5) defining and naming themes (e.g., Socioeconomic Buffers); and (6)

The process used an iterative analysis where information on the websites was cross-checked with what can be found in the literature to put whatever Ankor Pharm was doing in perspective. As an example, their bonus system was studied within the concept of customer engagement mechanisms in crisis situations (Chowdhury et al., 2021), and their in-house manufacturing was examined through the prism of the supply chain resilience paradigm (Gereffi et al., 2022). In

a bid to increase rigor, a coding framework (Table 2) was created to allow systematizing the matching of the content of the websites on the dimensions of resilience, following a traceable and replicable scheme.

Table 2 Coding Framework for Thematic Analysis

Code	Description	Example from Website	Literature Reference
Certified Supply Chain	Use of certified products and reliable suppliers	“Certified products from reputable distributors”	Bastani et al. (2021)
Customer Loyalty Incentives	Programs to retain customers through economic benefits	“100 UAH = 1 bonus, redeemable for products”	Chowdhury et al. (2021)
Operational Continuity	24/7 access and delivery to ensure service availability	“24/7 pharmacy operations, free delivery”	Ivanov (2020)
Internal Self-Sufficiency	In-house production and skilled staff to reduce external dependencies	“In-house pharmaceutical production, professional staff”	Gereffi et al. (2022)
Community Trust-Building	Free services and educational content to enhance social capital	“Free blood pressure measurement, useful articles”	Fiksel (2017)

5. Analytical Framework

The research utilizes an integrated framework of the analysis (Figure 1) based on integrating dynamic capabilities (Teece et al., 1997) and the models of supply chain resilience (Ivanov, 2020; Luckler et al., 2024). This framework is used to explain the analysis at Ankor Pharm by associating the practices with three key capabilities; sensing (recognition of threats and opportunities, e.g., quality assurance), seizing (knowledge exploitation and opportunity management, e.g. bonus program) and transforming (re-configuring resources, e.g. delivery services). The structure also embraces the systems approach used by Fiksel (2017) with the focus on promoting stakeholder engagement as the aspect of resilience.

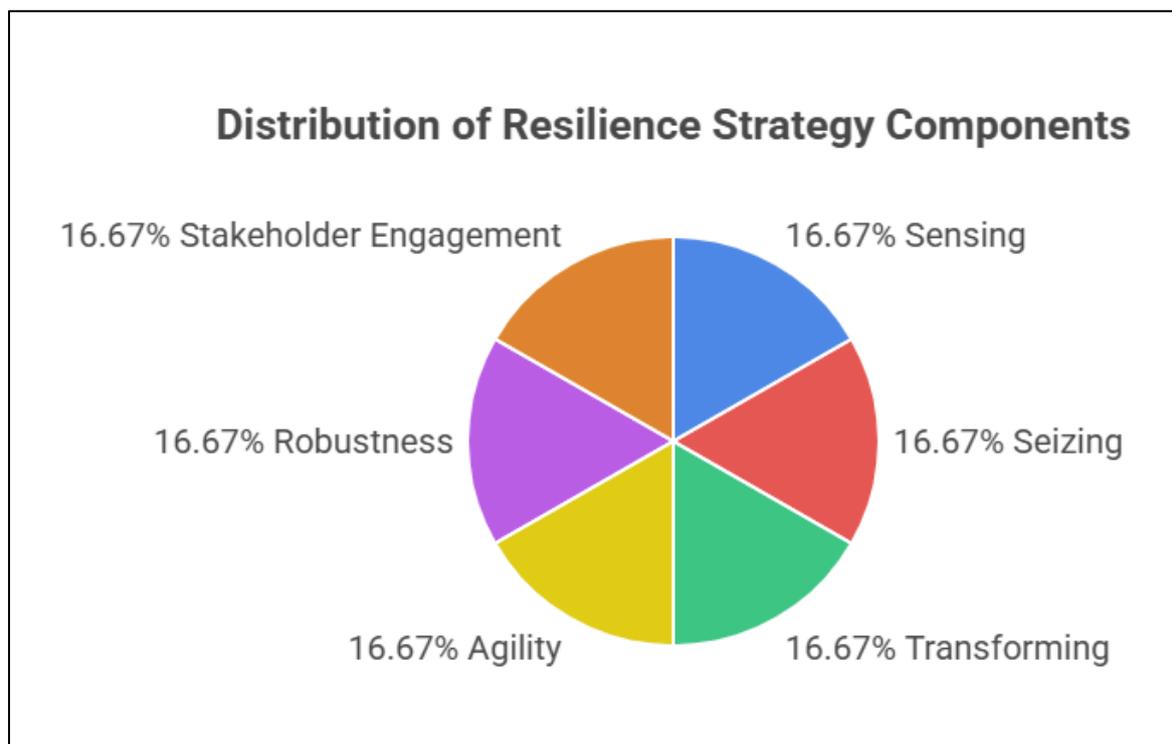


Figure 1 Analytical Framework for Ankor Pharm’s Resilience Strategies

It is demonstrated in this figure that dynamic capabilities (sensing, seizing, transforming) are integrated with dimensions of supply chain resilience (agility, robustness and stakeholder engagement). It presents the interaction of the practices of Ankor Pharm which are quality assurance, customer incentives, operational adaptability, internal capabilities, and community engagement to reduce the impact of war, and pandemic disruptions based on the theoretical bases of Teece et al. (1997), Ivanov (2020), and Fiksel (2017).

5.1. Validity and Reliability

In order to provide validity, the research will stick to the principles of case study research proposed by Yin (2018) e.g., construct validity (a variety of theoretical prisms), internal validity (causal relations through the thematic analysis) and externality validity (lessons based on generalization). The reliability is encouraged by transparently reporting the data of the data collection protocol (Table 1) and by reporting the coding framework (Table 2) that can be replicated. These positive aspects of the study include the consistency of the program due to the single source of data www.ankor.od.ua and the cross-checking of the scholarly literature, which makes the results more solid (George & Bennett, 2005).

5.2. Limitations

The use of such a single data source also restricts the quality of operations insights including quantitative performance data, or other internal processes that are not made publicly available. Also, the case study method, as context-rich as it is, can be inapplicable and restrict generalizability of the research to such settings as non-pharmaceutical or non-conflict (Yin, 2018). These shortcomings are overcome by anchoring the analysis on strong theoretical basis and on resilience strategies that can be transferred.

5.3. Ethical Considerations

Since the study has utilized publicly available information on Ankor Pharm online platform, no ethical approvals were needed. The analysis does not distort the integrity of the source material, but it is rather true to the practices of the Ankor Pharm without speculating beyond what is being presented in the data (Braun & Clarke, 2006).

6. Results

As revealed in the thematic analysis of the mentioned operational practices of Ankor Pharm provided on their official website, the company demonstrates a complexitudinally scalable business model that is rather active in exploiting its resilience in terms of war and pandemic through 5 dimensions of resilience, which are quality assurance, customer-driven innovation, operational flexibility, internal capacity and community involvement. A systematic content analysis and the support of theoretical frameworks, namely dynamic capabilities (Teece et al., 1997) and supply chain resilience (Ivanov, 2020; Luck et al., 2024), exposed these findings to show how Ankor Pharm manages to deliver services and preserve trust amid society in Odesa in the context of crisis circumstances in the city of Ukraine. Findings are also presented in themes and the supporting evidence in tables and figures have been provided to make the findings more transparent and analytically informative.

6.1. Quality Assurance: Addressing the Risk in Supply Chain

The adherence of Ankor Pharm to the concept of a territory of quality is applied by means of the intensive certification of products produced and the cooperation with the reliable distributors, so that all the varieties of medications should comply with the regulations of drugs. Temperature-controlled logistics is used in the pharmacy to preserve the integrity of the products, which is a life-saving practice in war-torn Ukraine, where infrastructure damages can destroy supply chains, and in times of pandemics, when fake drugs can be dangerous (Bastani et al., 2021). This plan helps to prevent the vulnerabilities that are a result of relying on global and shaky supply chains as attributed to the practices of Gereffi et al. (2022) that were focused on localized sourcing as a resiliency measure. Their certification process transparency also creates trust among the customers, thereby eliminating the trust deficit that is common in the situation of a crisis (Gereffi et al., 2022).

Table 3 Quality Assurance Practices and Resilience Outcomes

Practice	Description	Resilience Outcome
Product Certification	All products backed by quality certificates	Ensures regulatory compliance and customer trust

Reputable Distributor Partnerships	Exclusive sourcing from large, trusted suppliers	Reduces supply chain disruptions
Temperature-Controlled Logistics	Monitors storage and delivery conditions to preserve medication efficacy	Mitigates risks from infrastructure damage

6.2. Customer-Centric Innovation: Buffers of the Socioeconomic World

The bonus program, the system developed by Ankor Pharm that allows collecting one bonus point per every 100 UAH spent which can be used later on purchasing the necessary products at the token price (e.g. one good for one kopeck), acts as a socioeconomic cushion within the Ukrainian economy that is experiencing the impact of a crisis. The project combats monetary pressure inflicted by the inflation conducted by wars and budget limits brought about by pandemics that allow customers to be able to afford standard medications (Chowdhury et al., 2021). Transparency of the program, in that the balances of bonuses are listed on the receipts and can be verified by the pharmacists, fosters the low transaction costs and builds confidence as found by Braun and Clarke (2006) with respect to trust formation in the service industry. Flexibility of performance on bonuses in their redemption at any time empowers each customer as regards to Eisenhardt (1989) system on adaptive strategies of resilience.

Table 4 Bonus Program Features and Socioeconomic Impact

Feature	Description	Socioeconomic Impact
Bonus Point System	100 UAH = 1 bonus, redeemable for any product	Reduces financial barriers to medication access
Transparent Tracking	Bonus balances shown on receipts, verified by pharmacists	Enhances customer trust and engagement
Flexible Redemption	Bonuses usable at any time for any product	Empowers customers in economic distress

6.2.1. Operational Adaptability: Ensuring Continuity

The constant work of 24/7 pharmacy and the free pharmaceutical call line of Ankor Pharm also guarantees continuous access to medicines, which is important during the time of war-related curfews or coronavirus lockdowns. Their delivery services, considering the delivery supported by an online platform that has cart administration and order confirmation notifications, comply with mobility limitations that fit the viable supply chain model, which Ivanov (2020) classifies as agile. The smooth convergence of digital order and delivery can also be discussed as an example of dynamic resource reconfiguration capability in terms of disruptions according to Teece et al. (1997). These practices maintain continuity in operations especially under the condition of crisis where the ability to access healthcare physically is constrained (Lücker et al., 2024).

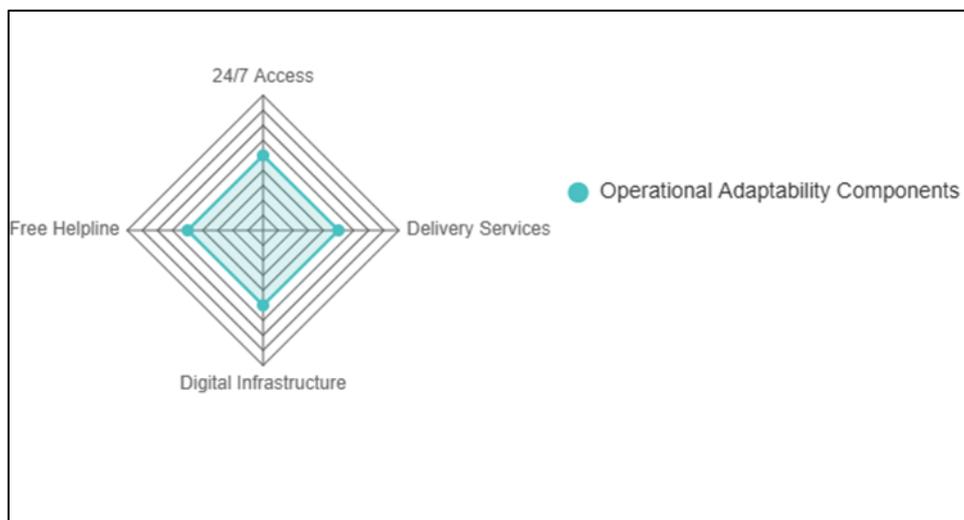


Figure 2 Operational Adaptability Framework

This number shows how the work of Ankor Pharm was adjusted and how it could be united with the outcomes of resilience metrics 24/7 access, delivery services, and digital infrastructure. It points at the compatibility between such practices and agility (Ivanov, 2020) and resource reconfiguration (Teece et al., 1997), which maintain service continuity during war and pandemic situations.

6.2.2. *Internal Capabilities: Reducing External Dependencies*

The internal production of the pharmaceutical company and a highly qualified workforce minimize the inability to use external suppliers, which is a significant factor of resilience in the case of unavailability of imports due to the conflict or global supply chain breakdown associated with the pandemic. The presence of in-house production is a guarantee of stock availability of essential medications, which is consistent with the findings of Gereffi et al. (2022) about the localized production due to its ability to guarantee stability in the supply chain. This fills one of the niches as the pharmacy can make individual orders of specialized medicine, which displays the adaptive strategies (Eisenhardt 1989). They also have a skilled, caring workforce that gives customers personal advice, which makes them trust them in high-stress situations (Braun & Clarke, 2006).

Table 5 Internal Capabilities and Resilience Benefits

Capability	Description	Resilience Benefit
In-House Production	Internal manufacturing of pharmaceuticals	Reduces dependency on disrupted supply chains
Individual Order Fulfillment	Custom orders for specialized medications	Meets niche demands in crisis contexts
Skilled Staff	Trained, empathetic personnel providing expert guidance	Builds trust and customer loyalty

6.3. **Community Engagement: Development of Social Capital**

With a free checking of blood pressure and weight, Ankor Pharm is an institution that is oriented towards the nearby community, which it combines with the comprehensive information presented at the online health section. The services cater to the needs concerning preventive care, which receives a minimal level of attention during crisis situations since it is not available to a large percentage of people (Bastani et al., 2021). The misinformation is countered by the provision of educational content, which is compliant with the information distributed in crisis management as observed by George and Bennett (2005). Through social capital, Ankor Pharm will enhance the sense of trust and devotion within the community, facilitating the resolution to follow the systems approach to resilience by Fiksel (2017).

Table 6 Community Engagement Practices and Social Impact

Practice	Description	Social Impact
Free Health Services	Blood pressure and weight measurements in all pharmacies	Enhances access to preventive care
Online Health Articles	Educational content on health topics	Counters misinformation, empowers customers
Community-Centric Identity	Positioned as a “social network of health”	Builds social capital and loyalty

6.3.1. *Synthesis of Findings*

These findings confirm that the quality assurance integrated with the customer-focused innovation, operational flexibility augmented and supported by internal resources and the community, are the sources of the strength and resilience of Ankor Pharm. Such practices are in line with what dynamic capabilities dictate (Teece et al., 1997) such that the pharmacy is able to sense risks (such as delays in the supply chain), opportunity (such as economic relief in the form of bonuses), and transform its resources (such as digital delivery systems). It is also evident in the findings along with the model of viable supply chain presented by Ivanov (2020), which incorporates agility, robustness, and stakeholder value. All of these dimensions are synthesized in figure 3, and it shows how they are related to each other in promoting resilience.



Figure 3 Integrated Resilience Model for Ankor Pharm

This figure illustrates a combination of the dimensions of resilience in Ankor Pharm, which is the interaction of quality assurance, customer incentives, operational adaptability, internal resources and community influences in alleviating the impacts of war and pandemic outbreaks. It combines dynamic capabilities (Teece et al., 1997) and the principles of a supply chain resilience (Ivanov, 2020; Lucker et al., 2024).

7. Discussion

The business model of Ankor Pharm analyzed on their official site has shown that their business had a strong structure to survive in the atmosphere of war and pandemic belligerences and this has provided a profound business model that companies facing an environment of crisis can use. Ankor Pharm is also an enlightened social organisation, with the key to its resilience involving quality assurance, innovation, and adaptability in its operations, internal innovations and capabilities, and involvement with the wider community. Reconciling these findings places them in the theoretical conceptualization of dynamic capabilities (Teece et al., 1997) and supply chain resilience (Ivanov, 2020; Lucker et al., 2024), and discusses their implications, limitations, and literature contributions to the business resiliency during crisis situations.

7.1. Theoretical Frameworks Congruency

The practices of Ankor Pharm are strongly affiliated towards the dynamic capabilities framework which is about the argument that a firm should be able to sense, seize, and transform resources when faced with environmental change (Teece et al., 1997). Sensing ability provided through their quality assurance practices including certified products and temperature controlled transportation (logistical) indicates their ability to anticipate threats in a supply chain such as the highly critical anticipation and alleviation of supply chain threats in war torn Ukraine, where infrastructure failures are imminent (Bastani et al., 2021). The bonus scheme which will offer economic respite with be flexible redemption is another similar aspect of exploiting the opportunities through the consideration of customers who face financial constraints explained by Chowdhury et al. (2021) in their study of adaptive customer engagement in the case of crises. Transformation capabilities such as operational flexibility, i.e., 24/7 operations and services, provide the ability to rearrange resources to the extent that operations can continue uninterrupted in the midst of mobility limitations (Ivanov, 2020). All of these practices depict a dynamic ability to manoeuvre the turbulent environment and support the views attributed by Teece et al. (1997) that resilience is a product of resources managed strategically.

The model of the pharmacy also reflects the viable supply chain model attributed to Ivanov (2020) that incorporates the natures of agility, resilience, and sustainability. Its 24/7 facilities and online delivery service enables agility to respond quickly to a lockdown or a city-wide curfew, in-house production increases resilience as the company does not have to depend on other companies (Gereffi et al., 2022). Engaging with the community via free health services and educational material could be viewed as a reflection of community sustainability in that stakeholders will build long-term trust in the initiative, following Fiksel (2017) in their approaches to resilience in the systems. Such combination of agility, robustness and stakeholder value apposes Ankor Pharm as a good example of viable supply chains in crisis conditions.

7.2. Business Resilience Implications

The strategies used by Ankor Pharm have a number of implications to those businesses which are forced to work in a crisis situation. To begin with, they have practices in quality assurance that emphasize preemptive risk management. Through its focus on certified products and trustworthy suppliers, Ankor Pharm avoids the risk of falsified medication and the supply chain interruption, which is an invaluable lesson to other pharmaceutical companies operating in war zones or in state of the pandemic (Bastani et al., 2021). This implies that companies are expected to invest in clear supply chains to enhance confidence in their customers and compliance with regulations especially in high-stake industries.

Second, the bonus program puts the importance of customer-centric innovations forward as the means of socioeconomic buffers. In addition, Ankor Pharm improves access to medication by relieving financial stress that war and pandemics may bring about (Chowdhury et al., 2021). This method is especially applicable to those businesses in areas that experience tight economies, they would indeed consider having a loyalty scheme that can facilitate retention and offer real rewards as well. Transparency and adaptability of the program also justify the importance of trust-building mechanisms, as affirmed by Braun and Clarke (2006), indicating that business entities ought to remain transparent in their communication platforms in dealing with customers.

Third, Ankor Pharm includes the operational flexibility, to deliver even around the clock, as well as digitally, which illustrates that flexible infrastructure is required. The finite possibility to keep delivering service in the case of curfews or lockdowns correlates with the findings by Luckker et al. (2024) on using digital tools to overcome disruption. It means that companies must engage in online platforms and other novel distribution channels to give people accessibility, especially in those places where they are not able to be mobile.

Fourth, self-manufacturing and highly skilled employees minimise the reliance on outside sources, which is a move that aligns with the focus that Gereffi et al. (2022) place on localised manufacturing as a way of ensuring supply chain stability. This is especially applicable in the case of companies operating in war-torn countries whose global supply chains are at a risk. It is indicative of the fact that companies ought to look into internal potential i.e., local manufacturing or specialized services, to become more self-sufficient.

Lastly, the community outreach program of Ankor Pharm by providing free health care and educational materials contributes to creating social capital in line with the systems model proposed by Fiksel (2017). By projecting its self as a social network of health, Ankor Pharm builds the trust of the community, which is at any time crucial especially in the context of crisis where there are prevalent misinformation and gaps in access to healthcare (George & Bennett, 2005). It means that companies need to include community-driven operations in order to enhance the relationships with their stakeholders and improve long-term resilience.

7.3. Contributions to Literature

The contributions to literature consist of twenty themes that involve eighteen elements in developed countries, which include Australia, Canada, New Zealand, the United Kingdom, and the United States; and twenty-two themes that cover eighteen elements in emerging countries, which include Brazil, India, Mexico, and South Africa.

The paper can make a contribution to business resilience literature since it uses dynamic capabilities and supply chain resilience approaches and applies them to a particular case within a war and pandemic setting. Although the presented body of knowledge deals mostly with pandemics or financial collapse (Chowdhury et al., 2021; Luckker et al., 2024), the case of Ankor Pharm considers the lack of study around the topic of war and pandemics and how organizations can survive under extreme circumstances. Beyond Bastani et al. pharmaceutical resilience model (2021), this analysis shows how community interaction and customer incentives can be used to supplement supply chain resilience strategies to have a comprehensive picture of resilience. Also, there is enrichment of the methodology of case study conducted by Eisenhardt (1989) through drawing generalizable lessons based on a single case whilst casting light on transferable insights of small to medium sized enterprises faced with crisis situations.

7.4. Limitations and Future Researches

The reliance on the Ankor Pharm web site as the source of all information in the study narrows down the quality of operational information (quantitative performances results or internal decision-making mechanisms). Whereas this makes the process consistent with the mandate of the client, it limits the chances of investigating non-public domains of the business paradigm (Yin, 2018). Also the single-case study design, although rich in contexts, can restrict the generalization to non-pharmaceutical or rather non-conflict setting (George & Bennett, 2005). One can consider the

possibility of including primary data, including interviews of Ankor Pharm customers or management, into future studies to have additional confirmation on findings and investigate some of the nuances of the operation. The effectiveness of Ankor Pharm strategies may also be tested through a comparative study across industries or regions to answer the absence and the holes in the literature on war resilience in the literature.

7.5. Practical Implications

The model of Ankor Pharm is useful to other companies. To overcome the issue of shocks in the economy, companies are advised to concentrate on clearer supply chains and production localization that will reduce interruptions, invest in digital networks to enhance capabilities to operate in a poised manner, and focus on customer-centric initiatives. Social capital requires resilience, and this may be boosted through participation, either in service or in outreach education. The strategies are very applicable to companies that are located in regions that are prone to crisis where flexibility and trust are paramount.

8. Conclusion

The business model of Ankor Pharm, described on their web-site (www.ankor.od.ua), is an outstanding example of resilience of business subjected to the disruptions that are caused by the war and pandemics in Odesa, Ukraine. By means of innovative but tactical amalgamation of quality management, customer-focused change and flexibility of operations, staff capacity, as well as community investment, the pharmacy maintains service and the society develops the sense of trust in a dysfunctional environment. Based on the dynamic capabilities framework (Teece et al., 1997) and the models of supply chain resilience (Ivanov, 2020; Luckder et al., 2024), the Ankor Pharm practices, including certified supply chain, flexible bonuses program, 24/7 availability with delivery, in-house production, and health services free of charge portray a resilience paradigm. The strategies mitigate the risks of the supply chain, eliminate economic hardship, provide operational clarity, decrease off-site dependencies, and create social resources, which fall within the academic knowledge on resilience in crises (Bastani et al., 2021; Fiksel, 2017).

The presented case study provides a powerful model that businesses can pursue to succeed in the crisis scenarios without losing sight on social responsibilities. The balance between agility, robustness, and value creation enjoyed by Ankor Pharm makes this business worth studying by small and medium businesses in such risky industries as the drug industry. Although constrained by the use of one source of data, the analysis offers practical insights to the companies located in conflict regions or those facing a pandemic, as it emphasizes the ability to build open supply chains, dynamically communicate with customers, digital infrastructure, local production, and community. A more solid expression could be found in examining primary data or contrasting examples in further substantiating these conclusions, but the case of Ankor Pharm may prove comparable in terms of emphasizing the potentiality of resilience as a strategic undertaking of business in life-or-death situations.

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