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The Speed–Sustainability Paradox in Dark Stores: Rethinking Efficiency, Employee Well-Being and Responsible Quick Commerce

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ABSTRACT

In order to make deliveries as efficient as possible, dark stores utilize their proximity to the consumer and organize fulfilment in terms of delivery speed. The rationale behind dark store operation is turning proximity, digital operational efficiency and labour into reliable delivery solutions. However, faster delivery does not mean effective delivery. The time saved for customers can lead to increased pressure on employees, disintegration of deliveries, duplication of items kept in inventory and disruption in the neighbourhood.

In this conceptual paper the situation will be analysed through the lenses of Paradox Theory, Stakeholder Theory, as well as insights from the Job Demands-Resources theory, algorithmic management theory and sustainable supply theory. In particular, the concept of temporal accountability will be introduced, which means accountability for overcoming the delivery promises making sure that time, risk and recovery opportunities are managed properly. A solution will be proposed distinguishing between productive speed, which is achieved through genuine process improvements, and transferred speed, which is achieved through transferring costs to the powerless stakeholders.

The notion of responsible quick commerce can thus be understood as governance in terms of promises, capabilities, and outcomes. Here, the system of governance is formed by adaptive delivery promises, secured operational slack, questionable algorithmic decisions, and collective assessment indicators related to reliability of services, labour conditions, and ecological consequences. A theoretical framework consists of six propositions relating to the processes and boundaries of interaction. The current paper claims that sustainable operation of dark stores should be viewed as a form of resource saving rather than as a succession of advantages associated with rapid deliveries.

Keywords: Dark stores, quick commerce, temporal accountability, employee well-being and sustainable logistics

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Introduction

A promise offering delivery made on a cell phone screen leads to a range of responsibilities which exist within a warehouse and in a community. The products must be in stock, found and verified, packed, and a delivery person has to access the client. Even though the client sees the predicted time of delivery, it is the task of the company to coordinate the logistics behind this. Dark stores help to achieve this coordination by placing the fulfilment centers close to the buyers and making them ready for internet shopping instead of physical purchasing. Their organisational importance stems from the high consistency between a commercial promise and time available for realising the operations.

There are reasonable bases for appreciating this scheme. Instant access to groceries and household

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essentials can be beneficial for people who have mobility challenges, caregiving obligations, unstable work schedules, or pressing issues. Such fulfilment reduces interference between customers and order pickers, while more accurate data on stock improves availability. In addition, geographical proximity may lead to shorter delivery distances. This raises the question of whether quick commerce should be seen as necessarily wasteful and customer convenience as unimportant from the societal perspective. Furthermore, none of the above offers evidence that the quickest delivery time is the best option for business.

Studies conducted in urban areas have shown that dark stores can have effects greater than their facilities. Buldeo Rai et al. (2023) have explained the geographical and transport elements regarding Paris area dark stores, including their need for public areas. Schorung (2024) relates dark stores to the recent changes in the food retail business model and fulfilment networks. This confirms that dark stores can be treated as a part of urban logistics. The dark store can be efficient as far as its internal dashboard is concerned, although it will affect other actors at another location and time.

This same boundary challenge applies to the labour issue. The decrease in lead time might be caused either by better placement of the products or by the fact that workers are ignoring their recovery periods. The second option will produce the same pressing time indicators in one case, although the outcomes will differ. While customers can use either option right away, the impact of the latter option unfolds over time through stresses like fatigue, mistakes, attrition rates, and service disruptions. The key analytical question therefore is how to figure out where speed comes from in practice and who pays for it.

This paper creates this distinction using the concept of time accountability, or the notion of the agent responsible for the time requirements, risks, delays, and possibilities that arise from the commitments made. The core of the author's argument is that speed is a matter of governance, for it determines the configuration of the work system before the order has even been accepted and the agencies that are liable for payments when the actual performance diverges from projections. Taking into account that the efficient delivery of services calls for proper handling of the promises made and not just the tasks that were performed,

The argument is based on existing academic research and does not suggest that the concepts of speed and sustainability have not been linked previously. Heikkinen and Aminoff (2023) investigate paradoxes related to sustainability in the context of e-grocery deliveries. Hashemi Petrudi and others (2026) make a detailed analysis of interconnected sustainability tensions in the context of food quick-commerce logistics. The current paper elaborates on the delivery promise being the mechanism that links competitive expectations, operational capacity, and allocation of impacts. The main research contribution of the paper is developing a conceptual framework on how effective governance can prevent the conversion of each efficiency improvement into one more requirement for acceleration. The discussion is limited to dark stores that deal with grocery products and household needs. The authors presuppose neither that people have the same status in the labor market nor that all the private entities use the same technologiesIt is important to highlight that the participants of the process, recipients, workers, and suppliers have differing roles. The interaction between different actors is important as any solution leading to success in one area of the process may create problems in other aspects of the process. The article does not deal with efficiency alone.

2. Conceptual framework and scope

This research utilizes the theory synthesis approach proposed by Jaakkola (2020). It synthesizes some publications on the issue of equality and proposes the explanations. Literature is employed intentionally for theoretical purposes. This conduct, however, does not entail the performance of systematic review, bibliometrics, or empirical research. No questionnaires, interviews, statistics, or performance of any company has been covered in the research. The platform-dark store system is the focal point of this analysis, involving the series of decisions made by a platform that affect the promises made by the platform, the preparation of orders at an installations level, and the different stages of execution of the order. Consequences for workers and the surrounding community can be analyzed at different levels of interpretation.

3. Theoretical foundations

3.1 Theoretical concepts of paradox and the survival of competing demands

Paradox Theory is a theory related to requirements that contradict each other while being interdependent over time (Smith & Lewis, 2011). In dark stores, the need for immediate throughput contradicts the need for rest, maintenance, ecological accumulation, and careful verification, but at the same time, carries benefits for future throughput. The dilemma arises from the fact that if one of the needs is neglected, the whole system collapses as not providing high levels of responsiveness ruins customer value, while being permanently focused on renewal deprives the possibility to provide this value.

Not all operational challenges can be classified as paradoxes. For instance, a shelves that is not well organized is a concern that can be resolved through engineering means. An intermediate state wherein organization must make a choice between two types of delivery may be a trade-off. A paradox is a situation whereby the organization must have both

speed of service provided and the recovery, buffering or accumulation as required by the speed of service. Organizations need to grasp the distinction between ordinary inefficiencies and complications of a theoretical paradox so that the management would avoid wasting their efforts.

Hahn et al. (2015) illustrate why sustainability conflicts are important. The application of their approach in this case means that efficiency might come at the expense of an organization for instance its store or labor force or even entire city. Temporal responsibility is a tool that allows making all those shifts visible. However, it does not offer a resolution, but it rather calls for constant questioning if dealing wth one problem harms another aspect from the perspective of sustainability.

3.2 Stakeholder theory and the distribution of consequences

The theory of stakeholder theory compels businesses to focus their attention on the relevant parties related to its operations (Freeman, 2010). In other words, according to Donaldson and Preston (1995), the implication of stakeholder theory is that the justification for stakeholder concern goes beyond financial reasons. When it comes to employee protection or community accessibility, this is important as it may require some expenses that cannot be justified by just the need for saving clients. There are various participants in the dark store ecosystem, whose interests may vary in their significance. Basically, customers would wish for the highest level of availability and comfort; employees want to work within reasonable limits, delivery people want to get enough you and work in safe conditions; suppliers wish for predictability of the terms of the receiving process, while residents want to stick to their normal routes. However, this doesn't mean that participants may lighten the burden of work or risks that they have. Therefore, the responsibility has to shift towards decisions made by the people that matter.

3.3 Work demands and algorithmic coordination

Job demands and resources influence stress and motivation according to Bakker and Demerouti (2017) since working hard is not just about speed in the case of dark stores. Order variability, handling items, shortage of personnel, substitution of customers and replenishment problems make the work more complex. Resources can involve adequate workforce, available equipment, autonomy in tasks, rest time, and help from a supervisor making it reasonable to ask if the operating system offers employees the needed resources.

Algorithmic management scholars offer a complementary explanation of transitioning from targets to controls and study algorithms as a means of directing and evaluating work processes (Kellogg et al., 2020). Vieira and Junte (2026) have studied dark stores in Spain and found that the role of management was still relevant in algorithmically coordinated work environments. These examples show that software should not be perceived as the main cause of changes.

3.4 Sustainable supply chains and business models

Carter and Rogers (2008) and Seuring and Müller (2008) integrate social, environmental, and economic factors into their analysis of supply chains. Bocken et al. (2014) and Geissdoerfer et al. (2018) stress the importance of business models when it comes to the creation of value and its capturing. That implies that sustainability is not only about having an electric fleet or using lighter packaging materials. The service provided, the way revenue is made, and the organization of demand also matter. The paper applies these ideas to the sale of immediacy as something expected as standard.

4. Understanding the speed–sustainability paradox

4.1 Productive speed and transferred speed

The framework clearly differentiates productive and transferred speed. Productive speed occurs when the process uses genuinely fewer resources or causes less inevitable delays, which lead to the same service. For example, correcting inventory accounting or reducing unneeded walking, improving equipment reliability, and ensuring replenishment in line with demand are cases when productive speed is possible. In this case, a reduction in order time can produce benefits for customers and employees alike.

When a speedier outcome is noted due to other burdens being taken on hidden, this is referred to as transferred speed. The receiving party may have loading periods that are very short; delivery staff may have considerably different aspects in their role; and citizens may have less available access. The firm's performance may record improvements, although implementation costs may rise. Here, we look at the nature and method of improvements made, but not the question of whether such delivery times are acceptable.

In practice, both conditions can happen simultaneously. A new routing system might both enable shorter time and eliminate a safety net for one of the workers. Thus, the framework is against the classification of the concepts just according to the managers' intentions. Evaluation shall involve checking what happens to conditions before and after alterations have been made, what happens afterward along with other influences which can come into effect.

4.2 The Relatedness of Location and Logistics Fragmentation***

Bringing products to consumers could shorten delivery distance; nonetheless, a multitude of smaller facilities would require stocking, replenishing, refrigeration, staffing, and allocating of inventory. More localized delivery does not necessarily lead to reduced total logistics operations. Environmental implications will differ from those of operation based on factors such as load factor, delivery consolidation of shipments despite incoming transportation, as well as energy used for product delivery, loss of products, and shopping trips.

Studies conducted on London parcels delivery prove the importance of studying the system of operations (Allen et al., 2018). Grocery fast delivery differs from parcel logistics, thus one cannot directly apply findings based on such research. The key point of the research is methodological relatedness: last-mile convenience has wider transportation boundaries.

The environmental puzzlement continues to obtain as long as proximity leads to smaller and more frequent orders. Certain platforms can cut emissions per order but then create further demands that make emissions grow bigger than they would be without any additional transport. The literature on rebound effect helps to understand why the decay of efficiency can prove fruitful (Sorrell & Dimitropoulos, 2008). Yet, the rebound effect needs to be proven, and it should not be assumed as a property of dark store networks.

4.3 Standardized guarantees and unpredictable physical workload

A customer interface can guarantee the same delivery time despite huge differences in order fulfilment conditions. The fulfillment of small orders of known products will differ from the one that includes a lot of items which should be either provided from stock or the substitutes found instead because the order volume might require more careful processing and temperature separation. Weather, traffic jams, elevator access, and restocking conditions may also add to variability of the process. The presence of a single target may hide this variability and lead to the organizational conclusion that anything away from this target is a failure.

The problem can be stated as the issue of variability allocation. If promises remain stable but demand and organizational complexity change, then flexibility must be provided by someone. Employees can increase their efforts, managers can staff their workers differently, suppliers can wait, or customers can be delayed in their orders. All the above-mentioned options imply certain costs. An efficient operating model gives an answer to the inquiry about which agent has to be flexible and specifies the limits before the order enters the operation.

4.4 Customer time and employee recovery

Convenience of the service saves time for customers, but it does not mean that there are no costs of labour. Each effort brings about the necessity of recovery from it. As soon as all gaps in the working process are labeled as idle capacity, the organization can lose all pauses that are necessary for effective work. Thus, the small increase in productivity might be followed by quality issues and problems related to workforce continuity.

According to Edmondson (1999), psychological safety is associated with team learning. Donohue et al. (2026) point out the fact that team psychological safety is beneficial under conditions of role overload. While none of the papers provide evidence of dark-store-specific risks, the article reflects the need to understand whether employees can report on overload and errors. In the proposed model, the voice is important because of the information that can be obtained beyond the throughput dashboard.

4.5 Individual convenience and collective legitimacy

When discussing the convenience of an individual in comparison with the legitimacy of a community inhabited by an individual, it is necessary to realize that the service offered through the platform may be favorable for the customers and have negative repercussions on the residents of the area. While it is possible for the customers and the residents to coincide, their interests are expressed via different channels. Customers can provide the rating while the resident, who is influenced by the loading process, does not have an equivalent pathway to influence operational decisions. This can be explained by Suchman (1995), who states that customer satisfaction on transaction levels cannot replace social legitimacy.

5 Temporal responsibility as the main idea.

5.1 Meaning and research limits

Temporal responsibility refers to the necessity of justifying how the service commitment divides the demand of time, delay, uncertainty, and restoration in the system of fulfilment. It is meant to be a notion that will be analyzed further with no existing measurement scale. The focus of it is the relationship between the promise and the necessary resources. The identification of the concept allows combining the perspectives of marketing, operational management, employment practices, and social consequences.

There are three aspects of accountability. The first aspect is the decision visibility – who makes a promise and who can change it. The second aspect is consequence visibility – where time pressure and delays could be obtained. The last aspect is the power to act – whether the persons affected can initiate any changes.

Temporality accountability differs from reliability of delivery. Companies can ensure the reliability of their commitments by loading liabilities onto subcontractors. It is also different from employee

satisfaction because satisfied staff do not guarantee satisfactory outcomes in terms of environment and vicinity. The essence of the notion is about governance in relationships. The results are important because they must show if that governance is working, not the other way round.

5.2 The cycle of acceleration

The proposed model starts with competition and client expectations. Competition and client expectations affect delivery commitments. Delivery commitments, in turn, create operational demands on outlets and delivery capacity. Any progress made can increase capacity, however, in case management takes that capability back into the tighter commitment and reduces staffing, that margin is gone. Another improvement has to take place just to keep the new standard.

This acceleration cycle can make it possible for real innovation to occur along with the persistence of the need to breed more pressure on their organisation. This means that even though the organisation has improved its technical capabilities of fulfilling, the organisation suffers from lack of discretionary capacity. Improvements of employees become more of an expectation than a gain. The positive contributions of environment can also be cancelled out by higher order frequency. The problem lies not in technology; the problem is in the method used by the organisation in using its achievements.

The opposite process of maintaining some benefit as a possibility of variability, repair, recovery, and learning is the other way. The retained margin provides dependable performance in accordance with the need for supply exceeding the expectations. It also allows finding room for some consolidation. The issue of retention is about costs and it should be considered rather than idolised. From a conceptual standpoint, it is dangerous to get rid of all margins.

5.3 Protected operational slack

Protected operational slack refers to the ability to prepare for chaos and renewal by keeping some capacity that cannot be taken away for the sake of short-term success. This might include additions to workforce during demanding times, maintenance time windows, space for safe traffic, and time for breaks and error rectification. This concept is opposed to excess capacity, which is not seen as this type of slack since its purpose and usage are already defined. The concept also differs from improvisation which has been adopted only after situations are already disrupted.

Operational reasoning provides grounds for saying that it makes no sense to regard utilisation and responsiveness as synonyms. Little's (1961) relationship, which defines how average flow, time in the system, and work in process relate to each other presents a valuable point of reference. It does not tell the exact staffing level that has to be maintained or confirm that the relationship between utilization with time of service is valid. The given argument is narrower: one must ensure that promises offered are consistent with reality, thus looking for variances in the available assessment.

Slack protection also needs to be examined from the distributional standpoint. A facility can gain slack by requiring delivery workers to wait and go unpaid. This allows the platform to use another party to its advantage. With regards to temporal accountability, such waiting is only seen as an implication of a type of operation; therefore, it can be assessed properly regarding fairness in allocation. Although the buffer does not happen to be included in store payroll costs, it does not mean that the capacity is socially free.

5.4 Integrated framework

The framework links competitive pressure and the expectation of immediacy with delivery obligations, and then work allocation, fulfilment techniques, and results. Temporal accountability is what establishes these connections through adaptive commitments, slack protection, contestable algorithms, and assessment mechanisms across stakeholders. Performance such as service, workforce, environmental, and local results is used for feedback. If the feedback has decision-making power, the platform can change the commitments made or the resources supplied. Where the platform lacks respect to the above points, there will be negative influence rather than improvements regarding the service received.

The relationship is illustrated in Figure 1 as a feedback loop. The arrows show estimated influences, not causal relationships. A key difference is being made between responses where burdens are reassessed repeatedly, and responses that change commitments or capabilities when effects are unacceptable. There is no suggestion that all interests can be met at the same time.

6. Governing responsible speedy commerce

6.1 Harmony of promise and operating environment

The effective design of promising starts even before purchase completion. Thanks to the current load of the platform, its basket complexity, location specifics, it provides the only plausible time slots. Timely promises do not imply arbitrary changes after the payment is done. Transparent estimates, fair treatment of challenging circumstances and coherent explanations of the service condition should be practised. A plausible time window gives more transparent information compared to a precise timeline that can't be supported by operational realities.

The service philosophy should help to separate cases when urgency plays a crucial role from those which can tolerate some delays. Customers have an opportunity to either choose an urgent alternative or a solution with a larger time window for order execution. The point made here is not whether the slow service is environmentally friendly, but is the

environmental argument reliable from the operational point of view.

From the ethical perspective, the platform is held responsible for the options it provides. The immediate choice made by the consumer does not justify the sanctioning of the dangerous actions associated with the offer. The company cannot mitigate responsibility merely by putting a sustainability label on an attractive current default. The governance of promises includes all elements related to the user interface, pricing, communication letters, and the impact of the choice.

6.2 Ensure the capacity to perform sustainable work practices

In designing work, an explanation of the entire task should be considered instead of just the best solution. This means taking into account components such as picking, checking, replenishing, cleaning, handling replacements, and packing, which all draw from the time available. Very often, the performance measures will look at completed picks only, which means that everything else becomes meaningless. Proper evaluation takes these important tasks into account and avoids jumping to conclusions based on low productivity results.

The recovery part of the work process should enter the staffing considerations as well. The break that looks good on paper but will be impossible to implement in real life cannot be considered a resource. The management should be empowered to change the timing of ordering or service in case the conditions put minimum guarantees at risk. In addition, there has to be a rationale for using this right: benefits based solely on productivity counteract a written commitment to well-being.

Training and ergonomic innovations are still helpful, but cannot be seen as substitutes for sufficient capacity. Expecting workers to take on more responsibility without any adjustments to the excessive workload shifts the burden of responsibility too low. Under the given model, the employees must provide expertise in what is manageable and what problems can rise, while the company has to manage employees, equipment, promises, and remedies. Well-being is final result as well as a condition of service.

6.3 Make algorithmic decisions contestable

An algorithmic system can be considered contestable when the parties concerned can raise questions about its input, interpretation or consequences and receive a justification in response. In the case of a dark store, a slow pick could be due to various factors: wrong coordinates being recorded, a blocked aisle, heavy item being picked, or a replacement ordered. The raw duration metric in and of itself is not able to identify any of these aspects. Contestability indicates the fact that the situation can influence the assessment rather than simply exist alongside it.

Among the techniques to achieve this is enabling reporting that is user-friendly, allowing for the review of challenged assessments, keeping records of supervisor overrides, and ensuring the protection of whistleblowers from retaliation. Human assessment must be empowered. A supervisor who has solid knowledge of the algorithm but is not able to correct a wrong judgment can only give explanations and not remedies.

The purpose of governance is to exercise accountable discretion. Automated planning applies under conditions when the boundaries, channels and powers are clearly defined. The involvement of workers should be encouraged in the system development and revamping process rather than only in the post-punishment phase. Monitoring data should be used not just to assess individual performance but contribute to a common understanding of how the process works.

6.4 Analyse gross impacts with efficiency

Environmental analysis should differentiate between intensity and total impact. Having less items packed for an order is valuable information; however, it doesn't lead to reducing total packaging used if the order volume increases significantly. The same applies to energy and emissions. There should be both indicators available and indication of the nature of the changes in the reports.

The relevant scope includes storing energies, bringing in products, sending items out, packing goods, losses during delivery, and activities changed by services. Comparisons must present concurrent operations. One quick commerce basket shouldn't be compared with a weekly shopping trip unless it is justified through quantities and processes used. The uncertainty of substitution has to be mentioned instead of being diluted with a positive assumption.

Circular initiatives as well need an analysis from an operational perspective. Reusable packaging requires collection, washing, storage, and transportation, meaning that its use effect depends on the number of cycles and losses instead of labels. Inventory pooling reduces redundancies but increases distance of replenishments. These examples show that a responsible approach requires combined operational and environmental thinking, and not just a simple list of claims in technology to be universally sustainable.

6.5 Develop accountability of localizing and suppliers

Coordination of the locality is responsible for addressing loading time and delivery worker waiting area, waste management, and complaint handling. The goal is to determine the constant problems occurring and give the authority to respond in that situation. There is no need for locals to be able to understand the internal contracting scheme to address the issue. The raw duration metric in and of itself is not able to identify any of these aspects. Contestability indicates the fact that the situation can

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7. Contributions and implications for management

The primary theoretical contribution lies in placing the delivery promise in the context of sustainability performance explanations. By understanding the fact that demand and speed perceptions are dynamic and created by platforms through advertising, default features, rates and service design, the model illustrates the idea that the delivery promise is an organizational commitment towards identifiable decision-makers and results, thus connecting strategic positioning to the physical and human conditions required for the fulfillment of the promise. An instrument measuring the elapsed time only cannot differentiate process innovation from burden displacement.

The third contribution is related to the way efficiency gains are distributed over time. The concept of acceleration cycle offers an explanation of how improving efficiency can be accompanied by constant scarcity of capacity. The idea of protected slack gives an alternate explanation of this phenomenon while the concept of temporal accountability provides the justification for the authority needed to keep such slack. The argument goes beyond the application of the paradox principle of treating contradicting claims and becomes focused on recognizing the situations where one of such claims consumes resources of another one repeatedly.

From the managerial perspective, it means that promises should be evaluated together on the levels of marketing, operations, human resources, and sustainability. The service dashboard should link the elements of efficient fulfilment with order fulfilment accuracy, the possibility of interruptions, the existence of work overloads, waiting of suppliers, environmental footprint, and people’s complaints. Each separate metric should be presented in a visible way as uniting altogether can prevent seeing the drop in one of the spheres behind the improvement in another one.

The framework changes the understanding of exceptions. Though one might take the delay as evidence of a failure that could be avoided. In any case, it might also be understood as an example of justified action for saving lives in exceptional conditions. Performers' systems have to have criteria for such distinction. Besides, speed alone will not be enough for establishing proper governance. Institutions have to know which processes lead to a particular result and how changeable those processes are.

In terms of policy and urban governance, this means that there should be coordination between the organizations involved in operating facilities, transporting goods, and organizing work. Hence, this paper does not provide a universal requirement for the legal delivery period. Instead, it argues that the responsibility for the promise should go hand in hand with the controlling it and being aware of safety, usage of public spaces, and environmental impact. Different contexts should shape the way the policy is implemented along with proportionate reporting requirements, which are applicable to small businesses.

7.1 Limitations of Balancing and Symbolic Responsibility Problem

A paradox approach can be regarded as an approach where everything problematic is treated as a paradox that can be solved with time. In certain cases, it is crucial to correct the situation instead of trying to balance it out. Lack of safety, absence of mandatory break, or a clear case of lying should not be justified if stopping it incurs more costs. The idea initialized by Stakeholder Theory allows making a distinction between the process of negotiating the quality of services and minimum conditions of the negotiation process.

The distinction allows avoiding the usage of symbolic responsibility in the economic sense of the word. A company may declare its well-being policy, issue environmental delivery badges, and hold meetings in a particular area while leaving the right to promise anything it deems necessary. Although such actions can have some meaning, it does not lead to effective actions being taken. For the accountability to be meaningful, an adequate correspondence of reporting outcomes with what the promises and actions demand should be ensured.

There is an existing constraint of financial soundness. Expenses or diminished short-term demand may have to occur to keep capacity in place, create review mechanisms and consolidate distribution. The conceptual argument does not suggest that each accountable practice is self-financing from the outset. Some of the safeguards might entail some reallocation of the margins or a more selective service provision. Others might depend on public coordination because individual firms cannot internalize the advantages of cleaner roads or collective loading arrangements. Acknowledging the costs involved makes the framework more realistic than just an announcement about universal commercial balance.

7.2 Achieving accountability without encouraging cover-up

The issue created by measurement is that outlets with more developed reporting ethos might be having more near misses, contested tasks or overload concerns than outlets where employees are reluctant to share their thoughts. The only ranking can punish the organization for being honest about its problems and reward those which conceal them. For this reason, managers must analyze the reports together with the quality of resolution, frequency of problems, outside observations, and employees' ability to express their opinions without worries on the negative implications.

There are similar issues with environmental and community criteria. One of the ways to indicate that delivery-related emissions are low is by outsourcing the task to an external contractor whose operation is outside the delivery limit. Another issue is that deterioration of access to a complaint channel could lead to lost complaints. Such aspects emphasize and require ensuring stable definitions and clear limits set. This situation helps identify why the framework doesn't allow collapsing the responsibility around the single score. Keeping the indicators separate allows to save information about avoided burdens instead of allowing it to be lost due to averaging.

So the right benchmark here is revealed accountability instead of seeming perfection. It means that decision makers should account for the evidence used; clarify the alternatives considered; explain how recurrence of effects brought to altered practices. This is not a guarantee that stakeholders will be satisfied but it will help to find out whether the organization learns from its actions or not. Having become objective practice through collected data, sustainable fast commerce manages to sidestep being fixed status earned after "one-time performance" way.

8. Boundary conditions and limits

The framework is most relevant in situations where there is a close relationship between delivery commitments, service and labor requirement. It does not apply in completely automated systems, scheduled food stores or specialized urgent delivery service. Automation shifts the main pressure point to maintenance and exception handling. Low density may reduce feasibility of consolidation as well as efficiency of additional facility's use. There is no one answer to the question of why customers want something to be completed within a certain time frame.

Therefore, the concept of urgency can differ from what people imagine. The idea of temporal accountability implies that one needs to clarify its conditions before being able to measure it. There is no causality related to slack, workload, carbon footprint and time of delivery.

9. Conclusion

The framework is most relevant in situations where there is a close relationship between delivery commitments, service and labor requirement. It does not apply in completely automated systems, scheduled food stores or specialized urgent delivery service. Automation shifts the main pressure point to maintenance and exception handling. Low density may reduce feasibility of consolidation as well as efficiency of additional facility's use. There is no one answer to the question of why customers want something to be completed within a certain time frame. Therefore, the concept of urgency can differ from what people imagine. The idea of temporal accountability implies that one needs to clarify its conditions before being able to measure it. There is no causality related to slack, workload, carbon footprint and time of delivery. Therefore, accountable quick commerce demands an appropriate connection between a platform's commitments and its capability. While commercial prosperity is still required, the conditions of employment must be reasonable, valid environmental analysis must be performed, and acceptance in urban areas must be attained if reliable services are to be offered. The strategic challenge is to be able to provide comfort at costs that are calculable and fair over a period.

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