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FLOODS AS ECONOMIC SHOCKS: A THEORETICAL ANALYSIS OF THE IMPACTS OF RIO NEGRO FLOODING ON THE AMAZONIAN INFORMAL ECONOMY

CHEIAS COMO CHOQUES ECONÔMICOS: UMA ANÁLISE TEÓRICA DOS IMPACTOS DAS INUNDAÇÕES DO RIO NEGRO SOBRE A ECONOMIA INFORMAL AMAZÔNICA

LAS CRECIDAS COMO CHOQUES ECONÓMICOS: UN ANÁLISIS TEÓRICO DE LOS IMPACTOS DE LAS INUNDACIONES DEL RÍO NEGRO EN LA ECONOMÍA INFORMAL AMAZÓNICA

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Abstract

The study analyses the floods of the Rio Negro as phenomena that interfere in the dynamics of the Amazonian informal economy, particularly in relation to income, employment and adaptive strategies of traditional communities, considering the centrality of territory in organising productive practices and everyday social reproduction. It aims to understand how such events operate as economic shocks affecting informal activities, identifying patterns of impact and economic reorganisation in contexts of hydrological recurrence. It adopts a theoretical-interpretative approach, grounded in a critical literature review, articulating different contributions to interpret the effects of floods on informal productive systems. The analysis suggests that such events introduce discontinuities in circulation, work organisation and spatial use, requiring continuous adjustments in productive strategies. It indicates that floods may be interpreted as recurrent negative shocks associated with reduced economic stability and increased vulnerability, while also stimulating adaptive practices. It concludes that the informal economy tends to reorganise continuously in response to floods, operating as a flexible system facing environmental instability, contributing to the understanding of the relationship between territorial dynamics and regional economy in Amazonian contexts.

Keywords: Floods. Informal economy. Resilience. Rio Negro. Vulnerability.

Resumo

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O estudo analisa as cheias do Rio Negro como fenômenos que interferem na dinâmica da economia informal amazônica, especialmente no que se refere à renda, ao emprego e às estratégias de adaptação das comunidades tradicionais, considerando a centralidade do território na organização das práticas produtivas e na reprodução social cotidiana. Define como objetivo compreender de que maneira tais eventos atuam como choques econômicos sobre atividades informais, identificando padrões de impacto e reorganização econômica em contextos de recorrência hidrológica. Adota uma análise teórico-interpretativa, fundamentada em revisão crítica da literatura, articulando diferentes contribuições para compreender os efeitos das cheias sobre sistemas produtivos informais. A análise sugere que tais eventos introduzem descontinuidades na circulação, na organização do trabalho e nas formas de uso do espaço, exigindo rearranjos constantes das estratégias produtivas. Indica-se que as cheias podem ser interpretadas como choques negativos recorrentes, associados à redução da estabilidade econômica e à ampliação da vulnerabilidade das comunidades, ao mesmo tempo em que impulsionam práticas adaptativas. Conclui-se que a economia informal tende a se reorganizar continuamente diante das cheias, operando como sistema flexível de resposta às instabilidades ambientais, contribuindo para a compreensão da relação entre dinâmica territorial e economia regional em contextos amazônicos.

Palavras-chave: Cheias. Economia informal. Resiliência. Rio Negro. Vulnerabilidade.

Resumen

El estudio analiza las crecidas del Río Negro como fenómenos que interfieren en la dinámica de la economía informal amazónica, especialmente en lo que se refiere a ingresos, empleo y estrategias adaptativas de las comunidades tradicionales, considerando la centralidad del territorio en la organización de las prácticas productivas y la reproducción social cotidiana. Tiene como objetivo comprender de qué manera estos eventos actúan como choques económicos sobre las actividades informales, identificando patrones de impacto y reorganización económica en contextos de recurrencia hidrológica. Adopta un enfoque teórico-interpretativo, fundamentado en una revisión crítica de la literatura, articulando diferentes contribuciones para comprender los efectos de las crecidas sobre los sistemas productivos informales. El análisis sugiere que estos eventos introducen discontinuidades en la circulación, en la organización del trabajo y en el uso del espacio, exigiendo ajustes constantes en las estrategias productivas. Se indica que las crecidas pueden interpretarse como choques negativos recurrentes, asociados a la reducción de la estabilidad económica y al aumento de la vulnerabilidad, al mismo tiempo que impulsan prácticas adaptativas. Se concluye que la economía informal tiende a reorganizarse continuamente frente a las crecidas, operando como un sistema flexible ante la inestabilidad ambiental.

Palabras clave: Crecidas. Economía informal. Resiliencia. Río Negro. Vulnerabilidad.

1. Introduction

The hydrological dynamics of the Rio Negro constitute a structuring element of socio-economic relations in the Amazon, especially as they affect territories where the informal economy plays a central role in the reproduction of everyday life, imposing recurrent reconfigurations in labour, income, and mobility circuits. In this context, floods are no longer interpreted merely as cyclical natural phenomena but are instead understood as events capable of disrupting economic flows, directly affecting small-scale and highly vulnerable productive activities. Thus, the object of

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this study is situated at the intersection of regional economics, environmental dynamics, and informal practices, seeking to understand, from a theoretical perspective, how these hydrological events interfere with the economic stability of traditional communities.

The academic relevance of this study lies in the need to expand the debate on economic shocks in peripheral contexts, especially those not captured by traditional metrics of the formal economy, requiring approaches that incorporate territoriality and informality as central analytical categories. From a scientific perspective, the investigation contributes to the advancement of interpretative models that articulate environmental and economic variables, providing support for analyses more sensitive to Amazonian regional specificities. Socially, the study is justified by the urgency of understanding the impacts of floods on historically vulnerable populations, whose survival depends on fragile productive arrangements highly exposed to extreme events.

The general objective is to analyse how floods of the Rio Negro may affect income, employment, and the resilience of the Amazonian informal economy, identifying patterns of impact and socio-economic reorganisation in contexts of hydrological recurrence. The specific objectives are to examine the relationship between territorial organisation and the informal economy, interpret floods as exogenous shocks to local productive systems, discuss levels of vulnerability and adaptive capacity of communities, and reflect on mechanisms of governance and economic management in response to these events. In this way, the articulation of these objectives allows for a comprehensive analysis combining spatial, economic, and social dimensions.

In this context, the guiding question is as follows: to what extent can floods of the Rio Negro be understood as economic shocks affecting the dynamics, income, and stability of the Amazonian informal economy? The hypothesis is that such events may be interpreted as recurrent negative shocks, associated with the compression of income flows and the increased exposure of traditional communities to cycles of economic instability. At the same time, it is considered that these

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impacts do not manifest uniformly, being mediated by adaptive strategies that reveal specific forms of productive reorganisation.

This study is explicitly defined as a theoretical essay of an interpretative nature, grounded in a critical review of the literature and aimed at constructing an analytical framework that articulates contributions from regional economics, geography, and studies on risk and vulnerability. Based on this approach, the study seeks to develop a conceptual interpretation capable of understanding floods as phenomena that produce economic discontinuities and, simultaneously, trigger adaptation processes in contexts marked by informality.

The structure of the article is organised into an introduction, followed by theoretical sections addressing Amazonian territorial dynamics, economic shocks associated with floods, vulnerability and adaptive capacity, and finally, governance and economic management strategies. This is followed by the final considerations, which articulate the main arguments and their implications for the field of regional economics, as well as the references that support the analytical path developed throughout the text.

By articulating environmental, economic, and social dimensions, the study proposes an interpretation that shifts the focus from the exceptional nature of events to their structural recurrence, emphasising the need to understand floods as a constitutive part of regional dynamics. This framework makes it possible to problematise the limits of traditional approaches that treat disasters as isolated episodes, highlighting the importance of incorporating informality as a central axis of economic analysis. In this way, the groundwork is laid for the theoretical development that supports the relationships between territory, risk, vulnerability, and the informal economy in the Amazonian context.

2. Literature Review

2.1 Amazonian territorial dynamics and reconfigurations of the informal economy in contexts of extreme hydrological events

Initially, understanding Amazonian territorial dynamics requires recognising that urban and riverine spaces are continuously shaped by interactions between the

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natural environment and social practices, producing configurations that go beyond the simple materiality of occupation. In this context, the informal economy emerges as a structuring element of these territorialities, operating through flexible circuits that respond both to environmental seasonality and to the constraints imposed by the formal market. This configuration suggests the need to define a theoretical field that articulates space, economy, and adaptation, enabling an understanding of how productive practices are reorganised in contexts of hydrological instability.

In this sense, by interpreting urban space as a social construction, Corrêa (1995) allows us to understand that patterns of occupation and circulation result from economic and political relations that structure territory unevenly. In parallel, the historicity of the city, as problematised by Mumford (1998), shows that urban dynamics incorporate cumulative processes of conflict and reorganisation that are expressed spatially. This articulation makes it possible to understand that, in the Amazon, the relationship with the river continuously redefines the uses of space, requiring an integrated reading between nature and economy.

Furthermore, by emphasising the diversity of interactions that sustain urban life, Jacobs (2011) provides elements to understand the vitality of local economies, especially those based on informal circuits. At the same time, Arantes (1997), in discussing symbolic and material disputes over space, shows that territories are constantly re-signified through social practices that challenge their forms of use. In this interplay, Zukin (2000) allows us to observe how urban landscapes come to reflect broader social transformations, in which the informal economy assumes a strategic role in mediating between survival and adaptation.

On the other hand, Amazonian territoriality presents specificities that cannot be reduced to conventional urban models, requiring approaches that consider the centrality of rivers as structuring axes of economic and social life. In this context, everyday practices of mobility, production, and exchange are deeply influenced by variations in water levels, shaping an economy marked by instability and the constant need for adaptation. This condition reinforces the understanding of territory as a dynamic field of relations, continuously reconfigured by recurrent environmental events.

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Moreover, when addressing the symbolic dimension of urban life, Velho (1978) shows that territoriality incorporates meanings that guide the social and economic practices of individuals. These dimensions are reflected in forms of labour organisation and in modes of permanence in areas subject to flooding, revealing a specific rationality of informal economies. In this sense, adaptation ceases to be merely an immediate response and becomes part of the everyday repertoire of communities.

At the same time, by analysing forms of social organisation in specific contexts, Andrello (2006) demonstrates that traditional communities structure their economic activities in direct dialogue with natural cycles. These practices reveal an economy that is continuously reorganised according to environmental variations, adjusting productive temporalities and subsistence strategies. This dynamic indicates that informality is not limited to the absence of formalisation, but constitutes a complex system of territorial adaptation.

In addition, it is possible to understand, based on the literature, that traders, self-employed workers, and small producers tend to continuously adjust their activities, reorganising points of sale, routes, and productive temporalities according to environmental conditions. These movements indicate an economy highly responsive to territorial changes, in which flexibility becomes a central element for maintaining income. This scenario reinforces the need to understand informality as a structuring component of the Amazonian regional economy.

In this context, it becomes possible to identify that mobility assumes a strategic role in economic reorganisation, allowing informal agents to circulate between different spaces according to the conditions imposed by the territory. This mobility involves not only physical displacement but also the adaptation of productive and commercial practices to new spatial configurations. Thus, the Amazonian territory appears as a system in constant transformation, in which the informal economy operates as a mechanism of continuous adjustment.

Consequently, the articulation between space, economy, and adaptation reveals that Amazonian territorial dynamics are marked by processes of permanent reconfiguration, in which different forms of land use coexist and overlap. This

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overlap highlights tensions and negotiations that define spatial occupation, especially in areas subject to recurrent flooding. In this way, the informal economy is consolidated as a practice that cuts across these disputes, mediating the relationship between permanence and displacement.

Finally, by delimiting the theoretical field that articulates territory, informal economy, and adaptation, it becomes possible to understand that floods not only reorganise space but also introduce discontinuities in economic flows. These discontinuities indicate the need to move towards an interpretation that considers such events as elements capable of producing ruptures and chain effects in productive activities. Thus, the way is opened for the analysis of floods as exogenous shocks and systemic disruptions in vulnerable economies.

2.2 Floods as exogenous shocks and systemic disruptions in vulnerable economies

Understanding floods as economically relevant phenomena requires an analytical shift that allows them to be interpreted as processes capable of temporally reorganising productive dynamics in territorially sensitive contexts. Within this framework, the informal economy assumes central importance, as its dependence on continuous flows makes it particularly vulnerable to environmental changes that interfere with circulation, production, and income generation. Thus, the analysis requires an approach that articulates environmental instability and economic reorganisation without reducing such interactions to isolated events, enabling floods to be understood as economic shocks characterised by disruptions in productive flows, the predictability of activities, and the regularity of exchanges.

In this sense, constructing an analytical typology of the economic impacts associated with floods becomes essential to avoid aggregated approaches that obscure the complexity of these dynamics. First, immediate impacts can be distinguished, linked to the abrupt interruption of economic activities and reduced circulation, and cumulative impacts, associated with the recurrence of events and the progressive deterioration of economic stability conditions (Silva, 2025b). In

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parallel, it is possible to differentiate direct impacts, which affect income, labour, and production, and indirect impacts, which manifest in the reconfiguration of exchange networks, territorial mobility, and the redefinition of spatial uses (Silva, 2025a). Moreover, these effects are unevenly distributed across different segments of the informal economy, affecting small-scale trade, self-employment, local production, and circulation circuits in distinct ways, thus highlighting the territorial and social mediation of these shocks.

By problematizing the notion of rare events, Taleb (2007) introduces an interpretative framework that emphasises the asymmetry between frequency and impact, shifting the focus from predictability to the magnitude of disruptions. This perspective is further developed by Aven (2013), who, in discussing the concept of risk, incorporates different levels of uncertainty that complicate the understanding of recurrent events in vulnerable contexts. The dialogue between these approaches allows floods to be understood as phenomena whose recurrence does not eliminate their disruptive nature, particularly when economic systems operate with limited capacity to absorb shocks, reinforcing the notion of economic shock as a process combining intensity, diffusion, and structural limitations in response capacity.

Furthermore, when analysing the propagation of impacts along supply chains, Dolgui and Ivanov (2021) demonstrate that certain disturbances do not remain localised, but rather spread across different levels of economic organisation. This perspective aligns with recent analyses of hydrological events, in which Loureiro *et al*. (2024) identify intensified processes of structural disruption in sensitive regions. Within this framework, floods can be understood as mechanisms of instability diffusion, simultaneously affecting production, circulation, and access to resources, thereby configuring impact chains typical of economic shocks in contexts marked by structural vulnerability.

On the other hand, Silva (2025a) suggests that such interpretations encounter limitations when they overlook territorial specificities, particularly in contexts where the informal economy constitutes the basis of productive practices. In such scenarios, the dependence on everyday flows and the absence of formal protection mechanisms make these economies especially exposed to environmental

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disruptions. This condition requires a situated analysis capable of capturing how flood impacts manifest differently within territories, reinforcing the understanding of economic shock as a territorially mediated phenomenon.

Moreover, when discussing the environmental impacts on socio-economic systems, Soldera (2025) highlights that extreme events produce reconfigurations that extend beyond the ecological domain, affecting productive practices and forms of economic organisation. At the same time, the institutional dimension of such events appears in the analyses of Barbosa Filho (2023), in which emergency responses reveal attempts to contain impacts that are already underway. This overlap of dimensions suggests that floods do not operate in isolation, but rather as phenomena that articulate environment, economy, and governance, expanding the understanding of economic shock beyond a punctual disruption.

Within this same perspective, by articulating empirical accounts reported in the literature with theoretical approaches, Lima (2024) demonstrates how the interruption of productive activities translates into immediate reconfigurations of subsistence strategies. When integrated with the theoretical perspectives of Taleb (2007) and Aven (2013), this dimension allows the impact to be understood not only in terms of the event itself, but also in terms of how it is absorbed by already fragile systems. Thus, the analysis shifts to consider not only the shock itself, but also the adaptive processes that emerge from it, highlighting the relational dynamics between disruption and recomposition.

In addition, the literature indicates that the informal economy tends to respond to floods through continuous adjustments, involving the relocation of activities, the redefinition of routes, and the reorganisation of exchange networks. These movements suggest that economic effects are not limited to immediate income loss, but involve broader transformations in forms of productive organisation and circulation circuits. This dynamic reinforces the need to understand informality as an adaptive system, whose flexibility becomes a condition for persistence in contexts of recurrent instability.

In this context, the absence of formal protection structures intensifies the exposure of these economies to environmental shocks, increasing dependence on

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local survival strategies and conditioning response capacity to territorial dynamics marked by instability and the recurrence of hydrological events. This condition highlights that the impacts of floods are not distributed uniformly, but are mediated by social, spatial, and institutional factors that shape the possibilities of action available to individuals.

Consequently, the articulation between risk, impact propagation, and local responses allows floods to be understood as phenomena that produce structural discontinuities in informal economies, while simultaneously triggering continuous processes of productive reorganisation. This interpretation shows that such events not only interrupt economic flows, but also reconfigure the conditions of social reproduction in vulnerable contexts, requiring approaches that incorporate vulnerability, exposure, and adaptive capacity as inseparable analytical dimensions.

Finally, by recognising that the effects of floods are mediated by specific social and territorial conditions, it becomes possible to move beyond a focus on immediate impact and towards an understanding of adaptation and resistance processes. This analytical shift allows the focus to move from disruption to continuity, examining how informal economic systems absorb and respond to recurrent disturbances. In this sense, the discussion leads to the next section, dedicated to analysing vulnerability, exposure, and adaptive capacity in the Amazonian informal economy.

2.3 Vulnerability, exposure, and adaptive capacity in the Amazonian informal economy

Developing a consistent understanding of the Amazonian informal economy in flood contexts requires recognising that accumulated knowledge has advanced in identifying patterns of vulnerability, although it still presents gaps regarding the articulation between territorial dynamics and productive adaptation. In this context, a significant portion of analyses tends to privilege environmental or economic dimensions in isolation, limiting the understanding of the interactions that structure the everyday life of communities. Therefore, it becomes necessary to develop an

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analytical approach that articulates these elements, highlighting both established consensus and points still under debate.

In this sense, by treating vulnerability as the result of the interaction between exposure, sensitivity, and adaptive capacity, Adger (2006) provides a conceptual basis that has been widely incorporated into contemporary analyses. This formulation contributes to shifting the interpretation of vulnerability from a static condition to a dynamic process, in which different factors combine in a situated manner. However, the way in which these dimensions' manifest in informal economies strongly dependent on unstable territorial flows remains open to question.

In addition, the analysis of exposure pathways allows for an understanding that the impacts of climatic events are not distributed homogeneously, being mediated by specific social and spatial conditions, as discussed by Gujarati, Eakin, and Luers (2008). This perspective broadens the understanding of impact selectivity, showing that certain groups are more exposed due to their position within the territory. Nevertheless, controversies remain regarding the capacity of such models to capture the complexity of informal economies in Amazonian contexts.

On the other hand, part of the literature still operates with analytical models that tend to generalise the effects of extreme events, disregarding local specificities that condition economic responses. This limitation becomes evident when analysing everyday practices that reveal differentiated adaptation strategies, often made invisible in more aggregated approaches. Such tension indicates the need to deepen theoretical debate in order to refine the understanding of these dynamics.

Furthermore, by emphasising adaptive capacity as a central element in responses to extreme events, Engle (2011) contributes to expanding the analytical focus beyond vulnerability, incorporating institutional and social dimensions. This approach aligns with global mappings indicating the concentration of risks in peripheral areas, as highlighted by Weis *et al*. (2016), while also pointing to structural inequalities in resource distribution. However, such perspectives still face

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challenges when confronted with realities in which informality constitutes the main mechanism of economic organisation.

Within this framework, recent studies focusing on the Amazonian context have shown that communities develop responses that combine local knowledge and productive reorganisation, as suggested by Silva (2025a). These analyses indicate that adaptation does not occur uniformly, being shaped by territorial, cultural, and economic factors that condition response possibilities. At the same time, Silva (2025b) points out that such strategies reveal forms of resistance that do not fully align with traditional models of vulnerability analysis.

Moreover, the literature indicates that informal workers tend to adjust their activities based on environmental signals, reorganising productive routines and circulation networks on a continuous basis. These movements suggest that adaptive capacity does not depend exclusively on formal resources, but is also constructed through local knowledge and accumulated experience. This observation challenges approaches that prioritise exclusively institutional dimensions in the analysis of adaptation.

In this context, the relationship between vulnerability and resilience remains contested, especially in economic systems marked by informality and territorial instability. While part of the literature emphasises the fragility of these economies, other approaches highlight their capacity for continuous adaptation under adverse conditions. This tension underscores the need to advance analytical models capable of simultaneously capturing vulnerability and agency.

At this point, it becomes necessary to critically problematise the use of the categories of resilience and adaptation, which are frequently mobilised as central explanatory frameworks in contemporary literature. Although these concepts contribute to highlighting the capacity of communities to respond to adverse conditions, their uncritical use may produce limiting analytical effects, shifting the focus from the structures that generate vulnerability to individual or collective coping strategies.

In this sense, resilience may operate as a normatively positive category which, by emphasising adaptive capacity, tends to obscure the persistence

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> of structural conditions of precariousness and to naturalise the transfer of responsibility for survival to the vulnerable subjects themselves. This shift reveals that adaptation, rather than necessarily representing overcoming, may also express forms of accommodation to contexts of recurrent instability, requiring an analysis that critically articulates agency and structural constraints within Amazonian territorial dynamics (Silva, 2025a, p. 3914).

Consequently, the analysis of Amazonian dynamics shows that the impacts of floods cannot be understood solely as external events, making it necessary to consider how they are incorporated into everyday economic practices. This incorporation occurs through adjustments involving mobility, labour reorganisation, and the redefinition of survival strategies. In this way, the informal economy emerges as a key space for understanding adaptation processes in contexts of uncertainty.

Finally, by recognising that vulnerability results from multiple interactions and that adaptive capacity is constructed in a situated manner, space is opened for an analysis that incorporates institutional and economic management dimensions. This shift allows the debate to move beyond the identification of impacts, focusing instead on mechanisms that enable more structured responses to floods. Thus, the discussion transitions to governance, economic management, and adaptive responses in informal productive systems.

2.4 Governance, economic management, and adaptive responses in informal productive systems

Sustaining the hypothesis that floods operate as recurrent negative shocks to the Amazonian informal economy requires recognising that such events not only interrupt productive flows, but also continuously reorganise economic temporalities. Within this framework, activities based on everyday circulation experience disruptions that translate into immediate rearrangements of survival strategies. Thus, the analysis emphasises that the recurrence of such events produces cumulative effects that go beyond the episodic dimension of flooding.

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In this sense, the articulation between multiple institutional levels may contribute to understanding that responses to extreme events are not limited to isolated actions, but are structured through decentralised arrangements, as discussed by Jordan *et al*. (2018). At the same time, economic management, even in informal contexts, emerges as a relevant practice in the reorganisation of productive activities, as highlighted by Carvalho and Silva (2024). This combination suggests analytical possibilities in which response capacity may be associated with both institutional coordination and the local adaptation of economic practices.

Furthermore, by considering the role of information in risk management, Bose (2009) argues that the anticipation of adverse scenarios may influence productive decisions, although in a limited way in contexts of low formalisation. This perspective allows for an understanding that, even in the absence of robust structures, economic agents develop ways of interpreting the environment that guide their actions. Such dynamics reinforce the hypothesis that adaptation occurs in a situated manner, incorporating environmental signals and accumulated experience.

On the other hand, the absence of integrated policies tends to increase the exposure of informal economies to recurrent events, making it difficult to build structured responses. In this context, individual and collective practices assume central importance in maintaining productive activities, even under conditions of high uncertainty. This condition highlights that vulnerability is not limited to the occurrence of the event, but is also produced by the fragility of support structures.

Moreover, in discussing polycentric governance, Jordan *et al*. (2018) point out that the articulation between different actors may, in certain contexts, enhance the capacity to respond to extreme events, without this occurring uniformly. At the same time, Carvalho and Silva (2024) indicate that management practices, even in informal environments, contribute to productive reorganisation under adverse conditions. In this interplay, Bose (2009) reinforces that access to information, even when limited, influences how economic agents respond to risks.

Within this framework, the combination of governance, management, and information reveals that resilience is not the result of a single factor, but is

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constructed through the interaction of multiple dimensions (Silva, 2025b). At the same time, the analysis shows that these dimensions do not operate homogeneously, varying according to territorial and social conditions. This heterogeneity reinforces the hypothesis that the impacts of floods are mediated by multiple elements that shape response capacity.

In addition, the literature indicates that informal workers develop strategies involving the relocation of activities, diversification of income sources, and reorganisation of exchange networks (Silva, 2025a). These practices suggest that adaptation occurs continuously, becoming embedded in everyday life as a response to recurrent flooding. This dynamic highlights that the informal economy operates as a flexible system, capable of partially absorbing the impacts of environmental shocks.

In this context, the relationship between vulnerability and adaptation appears complex, since response capacity does not eliminate exposure to events, but rather redefines their consequences. This condition indicates that resilience should not be understood as the overcoming of risk, but as a process of reorganisation under adverse conditions. Thus, the hypothesis gains analytical depth by considering that shocks not only produce losses, but also trigger productive rearrangements.

Consequently, by articulating the contributions of Jordan *et al*. (2018), Carvalho and Silva (2024), and Bose (2009), it becomes possible to understand that responses to floods involve multiple scales of action, ranging from local practices to broader institutional arrangements. This articulation should be understood as an interpretative possibility, in which economic resilience may be associated with the integration of local knowledge, adaptive management, and institutional mechanisms, without assuming their full consolidation in all contexts. In this sense, the hypothesis is sustained by showing that the effects of floods are simultaneously disruptive and structuring of economic dynamics.

Finally, by considering that the informal economy continuously reorganises itself in the face of recurrent events, the analysis points to the need to understand floods as constitutive elements of regional dynamics. This perspective shifts the focus from exceptional events to structural recurrence, emphasising the importance

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of adaptive strategies in maintaining productive activities. In this way, the section concludes the literature review by sustaining the hypothesis and consolidating the analytical framework that guides the theoretical interpretation of the study's findings.

3. Final considerations

The analysis suggests that floods of the Rio Negro interfere with the economic organisation of traditional communities, producing changes in income, employment, and mobility circuits that structure the informal economy. In this context, the argument indicates that productive dynamics do not occur homogeneously, being continuously reorganised through adjustments that reflect the territorial and social conditions in which these activities are embedded. Thus, the proposed objective is linked to the identification of interpretative patterns that relate environmental instability to economic reorganisation in everyday Amazonian life.

Revisiting the central research question, the argument developed indicates that floods can be understood as economic shocks, as they introduce discontinuities in productive flows, affecting income regularity and the stability of informal activities. These effects tend to manifest through reduced circulation, the reconfiguration of workspaces, and the constant need to redefine survival strategies. In this sense, such events may be interpreted as phenomena that extend beyond the environmental dimension, assuming relevance within local economic dynamics.

In this regard, the analysis suggests that floods may be interpreted as recurrent negative shocks, associated with cumulative effects that increase community vulnerability. At the same time, such events appear to stimulate the development of adaptive strategies that enable the continuity of economic activities, even under conditions of instability. This relationship between impact and adaptation points to a dynamic in which the informal economy tends to continuously reorganise itself in the face of adversity.

From a theoretical perspective, the study contributes by proposing an approach that articulates regional economics, territorial dynamics, and socio-

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economic vulnerability, highlighting the need for frameworks that consider informality as a central analytical element. This perspective broadens the understanding of economic shocks in peripheral contexts, shifting the focus from exceptional events to their structural recurrence. In doing so, it opens space for interpretations that integrate environmental and economic dimensions in a more context-sensitive manner.

From an analytical standpoint, the text allows for the suggestion that economic management mechanisms and institutional arrangements should be considered in light of their possibilities and limitations within contexts marked by informality and territorial vulnerability. In this sense, the articulation between local knowledge and planning instruments may be understood as a relevant interpretative dimension, without assuming their effective consolidation in all analysed contexts. Furthermore, the adaptive capacity of informal economies tends to appear as a situated process, conditioned by social, territorial, and institutional factors that shape its forms of expression.

Finally, the analysis suggests that understanding floods as a constitutive element of Amazonian dynamics allows for progress in developing more consistent interpretations of their economic implications. This approach contributes to shifting the debate from a reactive logic to a perspective that values adaptation and resilience as structural dimensions. Within this framework, the study provides theoretical insights for advancing discussions on informal economy and vulnerability in contexts of continuous environmental change.

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