Mall Sweet Mall: Are we witnessing the death of an icon?

Abstract: Is the era of shopping malls ending? While in Brazil the shopping mall industry continues expanding, in the United States the increase in the number of closures of malls over the last decade casts doubt about the future of these temples of modern consumption. This paper discusses the trends currently affecting the shopping mall industry and, using the system dynamics method, presents a model to explain the dynamics guiding the interplay of consumer needs and the business proposition of shopping malls. The model also accounts for the presence of tipping points that can accelerate the death of a mall under special circumstances. The paper emphasizes the role of dynamic capabilities in keeping shopping malls attuned to changing consumer needs and presents five scenarios to explore common threats to a mall's business model, including the growth in online shopping and the occurrence of turbulent economic cycles.

Keywords: dynamic capabilities, shopping mall, system dynamics

1. Introduction: A parable of modern times

After World War II, soon after American families – and their money – started moving to the suburbs, the concept of shopping mall emerged. The massive commercial centers soon displaced street commerce as the major destination for shopping due to their convenience and proximity of the new centers of living (Cohen, 1996). Over time, the malls started to occupy a central role in the lives of families due to the increased sophistication of their offer and the opportunities for leisure and social contacts. A culture of shopping malls ensued, leading to multipurpose shopping behaviors and a new locus of social life (Eppli & Benjamin, 1994).

The concept of shopping malls proved to be irresistible and it soon spread to other countries. The value proposition of a typical mall in the American suburbs comprised elements like great variety of stores and products, easy parking and the convenience of shopping at late hours (Cohen, 1996). Anchors were also part of the recipe (Lorch & Hernandez, 2008). In the history of shopping malls, anchors were typically big department stores occupying less expensive (compared to the cities) real estate.

Over time food courts, restaurants, cinemas, sport activities, services and experiences were progressively integrated into a typical malls' repertoire (Díaz, Gómez, & Molina, 2017). In other words, shopping malls started to diversify their offer, moving from mere commerce of goods to entertainment and a diverse set of experiences (Rousseau & Venter, 2014). In addition, the concurrent development of credit cards and the increased economic well-being in the second half of the last century provided the definitive impulse to consolidate the *institution* of shopping malls in the social fabric of capitalist countries (Cohen, 1996).

Brazil was not immune to that trend. In addition to offering a myriad of stores and convenient parking, shopping malls have spread in the country by offering complementary elements in their value proposition. Consumers in Brazil perceive the shopping mall as a place with good infrastructure (e.g. bathroom, leisure areas, ATMs), positive image, pleasant environment and, especially, with a degree of safety superior to ordinary streets (Parente, Brandão, Miotto, & Plutarco, 2012).

The shopping mall industry is very relevant in Brazil. According to the representative association, in 2015 there were 538 functioning shopping centers in the country, with a gross leasable area of 14.680 m^2 (ABRASCE, 2016). In 2016, the sector's revenue reached more than R$ 157 billion

(equivalent to half of the supermarket sector's revenue in the country), and 20 new centers were opened. An adverse economic environment have not stalled the plans for the opening of 30 more malls in 2017 (Souza, 2017). On the other hand, the recent recession has provoked a downturn in the industry: compared to 2015, the average vacancy increased by 4.7% in 2016 (Souza, 2017).

While in developing countries like Brazil there seems to be room for the expansion of shopping malls, an intriguing phenomenon in USA started to occupy the news in the last years: the death of shopping malls and the possible demise of their status in social life (e.g. Peterson, 2017; Uberti, 2014). In fact, in that country shopping malls have been struggling and dying in an unprecedented degree (Peterson, 2017). The culprits seem to be the combination of economic recession, socioeconomic shifts, growth in online shopping, cultural and demographic changes, and poor consumer experience (Anselmsson, 2016; Demirkan & Spohrer, 2014; Smith, 2015). The U.S. retail vacancy rates is expected to be around 13.1% at the end of 2018 (Statista, 2017). Estimates for the coming decades point to a share up to 50% of the American malls at risk of closing or being repurposed (Uberti, 2014).

From a Brazilian perspective, this phenomenon seems indeed interesting. In the country, there have been scarce cases of shopping malls dying. One case in point was the *Shopping Best*, in the city of São Bernardo do Campo (Cabrera, 1999), which closed doors in the decade of 90's after a wave of new shopping malls in the nearby São Paulo started to entice its former costumers. Of course, new malls always face the risk of failure due to over optimistic forecasts in small or saturated markets. However, the very idea of the demise of the shopping mall culture in a country that fully embraced this modern icon seems thought-provoking. Nonetheless, it is a possibility worth considering. Is the era of shopping malls ending in the US? If so, will malls endure a similar fate in Brazil?

The scholarship on shopping malls typically revolves around their central role in the commercial ecosystem, their nature of agglomeration economy, the externalities they provoke and topics such as retail lease valuation (Eppli & Benjamin, 1994), among others. Most of previous research did not investigate the factors associated with the death of a shopping mall. Two exceptions are Smith (2015), who explores the effects of e-commerce and changes in consumer behavior on shopping center development, and Anselmsson (2016), who assumes that a mall can indeed die and investigates how reinvestments and improvements can improve its appeal and economic performance.

While there is no shortage of books and frameworks to explain why businesses in general die, to our knowledge there is no academic work modelling the death (or the resilience) of shopping malls. In a sense, this is to be expected since it is a relatively recent phenomenon. Therefore, our goal is to contribute to the scholarship on shopping malls by developing a model that dynamically describes the interplay of malls and consumer needs as well as the effects of changes in the broader socioeconomic ecosystem.

We are preoccupied with the death of a mall, but also with factors that foster its resilience. Central to the latter issue is the concept of dynamic capabilities. Dynamic capabilities means "the firm's ability to integrate, built, and reconfigure internal and external competences to address rapidly changing environments" (Teece, Pisano, & Shuen, 1997, p. 516). The model also accounts for the phenomenon of self-fulfilling prophecy that sometimes occur in social contexts (Merton, 1948). In the case of malls, there seems to exist a tipping point that may trigger the rapid closure of a struggling business.

Before presenting the model, we briefly discuss the factors associated with the death and the resilience of shopping malls.

2. Factors that may explain the deaths of malls

Shopping malls, as other retail organizations, have been facing a myriad of challenges in recent times, especially in the USA: high vacancy rates (Statista, 2017), decline in sales, increase in costs (Díaz et al., 2017), stronger retail competition (Beyard, Corrigan, Michael, Pawlukiewicz, & Bach, 2006), need to improve customer experiences (Fantoni, Hoefel, & Mazzarolo, 2014) and brand differentiation (Eppli & Benjamin, 1994), need to reduce labor and create new formats (Lorch & Hernandez, 2008), and pressures to innovate or renovate (Chebat, Michon, Haj-Salem, & Oliveira, 2014).

Poor managerial capabilities can easily lead a mall to death. Nevertheless, even good management cannot be sufficient to resist strong changes in the paradigm of shopping. We discuss the main threats to the mall industry in the USA assuming they can also shape the future of malls in other countries, like Brazil. Among the factors behind the decline of shopping malls in USA, we stress the role of demographic, economic and technological changes.

Demographic changes include longer periods spent at work, different attitudes towards transportation or traffic and increased preferences among several groups for experiences in lieu of products. In addition, there has been a change in how genders typically approach shopping. Historically, women preferred to go to malls with friends, adopting experiential and hedonic lenses to those events (Dittmar, Long, & Meek, 2004). According to Chebat, Haj-Salem and Oliveira (2014), when people visit a shopping mall with friends, they spend more time in the place, visit more stores and spend more on average. On the other hand, while women still represent 59% of shoppers in malls (Dearo, 2016), nowadays they have less spare time to do their shopping, adopting an utilitarian stance toward the process. They resort to shopping without company, on the internet, or near their residences. The shift in demographic factors is not restricted to gender issues. New generations have been shunned the traditional "culture of malls". Millennials, who have been born in a digital world, are less attached to malls than older consumers (Chebat, Haj-Salem, et al., 2014): shopping online is an integral part of their lives.

Economic factors include recession and the impoverishment of communities (Demirkan & Spohrer, 2014). Severe crises, such as the one that hit the USA in 2008, can have long-lasting consequences for malls in critical shape (Smith, 2015). Although economic turbulence tends to hit low-income shoppers harder, it may also change the saving patterns of high-income shoppers, who become more cautious. In addition, high-income families seem less attached to malls (Chebat, Haj-Salem, et al., 2014), and have more flexibility to restrain their consumption, waiting for sales or searching better prices. However and critically, economic factors include more than temporary hardships. They include the growth in local and even international competition, competition among different formats of retail (malls, street commerce, small retail centers) and the structural change in the provision of goods represented by online commerce (Anselmsson, 2016).

The main technological threat comes, indeed, from the growth in online shopping. While malls in the past had the advantage of being open for long hours, that advantage vanished as Internet access became ubiquitous and consumers learned to trust the major online retailers (e.g., Amazon). Moreover, consumers do not need to spend energy and time searching for the best offers in a mall. They can do it online, fast and unrestricted by geographic limitations. They have also an infinite variety of products readily available for purchase on their computers or smartphones. When they do go to the malls, it is common to see them doing online research to compare information on the

products under consideration, treating stores as mere showrooms. This trend has led several chains to adopt multichannel strategies (Beauchamp & Ponder, 2010). In particular, the possibility of picking up orders purchased online in retail stores seems a win-win strategy, inasmuch as it facilitates inventory management while also increasing additional impulse purchases at the store. However, it is still unclear how this change in consumer habits will affect the entire concept of a shopping mall. In fact, most analysts recommend not only leveraging technology and multichannel strategies, but also increasing the focus on convenience and experience, and exploring new formats of malls (Fantoni et al., 2014). Another important technological change is the power of the masses consubstantiated in websites and apps that provide evaluation and recommendation for products and services, replacing a role traditionally performed by friends, sales clerks and family members. New developments in the technological forces also include the growth in virtual experiences that tend to encompass some facets of the shopping process, transferring them to the home environment. Soon it will be viable to try or test a product in the comfort of home.

The "place" – or the physical assets – which is still considered as highly strategic asset in retail (Reinartz & Kumar, 1999), can now become a big liability in the quest for survival. It is difficult, costly and time-consuming to renovate or recreate it. As it happens with residential buildings, consumer tastes change frequently, leading to an accumulation of buildings created according to former preferences. Formats and physical concepts depreciate over time. For instance, current shopping malls tend to have "well-being attractors", such as water fountains, aquariums and natural green spaces (Rosenbaum, Otalora, & Ramírez, 2016). Every old mall attempting to replicate this new trend will have to invest a great amount of resources (tangible and intangible) to adequate its physical structure (Chebat, Haj-Salem, et al., 2014). Any mall failing to continuously renovate itself may be decreasing its resilience and risk its survival (Chebat, Michon, et al., 2014).

3. Resilience of malls and dynamic capabilities

Having briefly discussed the factors that may change the fate or, at least, the value proposition of shopping malls, we now turn to factors that can increase their resilience in face of turbulence. Resilience is a measure of an entity's or a system's ability to survive and persist within a variable environment (Meadows, 2008).

Resilience includes the competence for reading the broader environment, as well for adapting to its changes and absorbing exterior shocks. Malls have been trying to adapt by renovating their atmospheres and increasing the mix (and relevance) of stores and experiences, with the goal of increasing consumer satisfaction and, consequently, the level of spending (Chebat, Michon, et al., 2014).

The attributes of a mall are very relevant to its degree of resilience. According to Anselmsson (2016), there are seven group of attributes undergirding to the attractiveness of a mall: access, retail mix, atmosphere, service, refreshments, promotion and entertainment. Table 1 presents a summary of the attributes.

Table 1. Factors attracting consumers to a shopping mall

Attribute	Description
Access	Distance (in time and space), parking, traffic flow, opening hours, public transportation, and infrastructure. It can also encompass convenience, location and availability.

Retail mix	Number and variety of stores, depth of assortment, number and type of brands, style, anchor stores, discount chains.
Atmosphere	External appearance, architecture, design, layout, visual appeal, cleanliness, lighting, decoration and signs. It confers identity to a mall.
Service	Information desks, security guards, availability of wheel chairs, strollers, directories, lavatories, level of education and courtesy of employees
Refreshments	Food and restaurants. A factor of competition among malls.
Promotion	Promotion as the strategic "P". Advertising frequency and design, media exposure, sales, newsletters, sales and bargains.
Entertainment	Temporary, event-based and permanent entertainment. Cinemas, special events, playground spaces for kids, amusement parks, theater complexes, sports, bowling, etc.

Source: Adapted from Anselmsson (2016)

Anselmsson (2016) investigated the impact of investment in each attribute on sales and traffic from. Access, retail mix and atmosphere proved to affect positively both sales and visits. Improvements in service increased the number of visitors but not sales. Refreshment (restaurants and food) increased sales but not visitors. Finally, promotion and entertainment had a null effect in his study.

We can conceive the resilience of a shopping mall as being a combination of the following characteristics: its set of attributes, the socioeconomic status of its consumers, its set of attributes, the dynamic capabilities of its management and the extent to which it satisfies additional needs of its consumers. The more a shopping mall caters to a high-income community, the greater its resilience against turbulent economic conditions. A mall that has a run-of-the-mill set of attributes is subject to strong effects from new competitors more attuned to current expectations from consumers. One special attribute, which is almost cases fixed (but it may change when a new subway station is developed, for instance), is physical convenience or location. This condition enhances resilience when there is a guaranteed flow of consumers from subways stations and from integrated commercial and residential conglomerates. Another factor adding or subtracting layers of resilience is management's dynamic capabilities. When those capabilities are less than ideal, managers fail to adapt in a timely fashion, decreasing the mall's resilience to external shocks. Finally, when malls satisfy a plethora of consumer needs, as in the case of Brazil, they have an additional layer of protection against turbulence.

In this paper, we focus especially on the role of dynamic capabilities in providing resilience for malls. Shopping malls are ecosystems of solutions to consumers. They cater to a myriad of human needs, from the utilitarian to the social and symbolic ones (Chebat, Haj-Salem, et al., 2014). As in the case of any regular business, shopping malls need to tackle threats and explore opportunities. They need to adapt to changing needs and macro forces. The concept of dynamic capabilities is useful to understand the degree to which malls can reinvent themselves in the face of mutating contexts.

Organizational capabilities are a combination of people, skills, processes and intangible factors (Warren, 2008). Most capabilities are concerned with building and maintaining resources, such as clients, staff, set of products, reputation and physical capital. Dynamical capabilities are a special case that represents a "learning to learn" competence, associated with the processes of developing and implementing strategic decisions. When those capabilities are operating, organizations can easily design processes that allows the combination, recombination, transference, copy and division of resources with the goal of adapting to a changing environment (Eisenhardt & Martin, 2000). In the same vein, Teece (2009) asserts that dynamic capabilities enable businesses to create, deploy and protect the intangible assets that support long-term business performance. When strong

dynamic capabilities are in place, organizations can track closely the dynamic evolution of the markets (Eisenhardt & Martin, 2000). They are essential to understand how an organization deals with one of its crucial paradox: how to adapt and innovate amidst the need to operate smoothly its current structure. Although it is not simple to measure the dynamic capabilities of organizations, one common approach is to benchmark companies that excel in innovation and organizational learning. A complementary approach is the measurement of innovative actions developed as consequences of listening to consumers and making sense of new market conditions.

One interesting example of how shopping malls can employ dynamic capabilities comes from the research of Lorch and Hernandez (2008), who investigated in case studies how Canadian malls adapted to remain competitive in their markets. Analyzing 20 shopping malls owned by the same company (Ivanhoe-Cambridge), representing 750,000 square feet of gross leasable area, they identified a three-pronged approach to reach comparatively low levels of vacancy rate (between 3.7 and 4.1 – well below the figure for other competitors). One leg of that approach was the expansion, in some cases, (e.g, small malls) of the gross leasable area, coupled with investment in interior redesign and improvement in common area space. The second leg was the attraction of larger stores to be anchors in the malls. The third leg was the change in the mix of stores, giving emphasis to fashion goods and leisure. From 1996 to 2001, the company perceived that the standard format for malls was changing towards large malls, located in populous centers, and presenting a mix of retail and (increasingly) entertainment. Sensing that change, Ivanhoe-Cambridge malls rapidly changed their value proposition, including cinemas, supermarkets and anchor stores in their mix. Those moves reflected both a successful tracking (and mimicking) of competitors and, at same time, a search for differentiation of the company's brands in relation to less agile companies.

Next, we present the model and explore five scenarios subsuming the main elements discussed so far.

4. System dynamics model

System dynamics is a simulation method pioneered by Forrester (1961) and explained in texts by Ford (2010) and Sterman (2000). It focuses on understanding the structures in a system that produces dynamically certain patterns of behaviors. The method is especially suited for modeling complex social systems. It propitiates a "10,000 meters" view of the system, portraying its structures and policies in an aggregate manner. The hallmark of the system dynamics approach is the identification of endogenously generated processes. In other words, it identifies feedback loops linking diverse variables in complex systems that ultimately determine the behaviors observed in such systems (Richardson, 1999). Importantly, the method allows the quantification of effects from nonlinearities and delays. Those elements, common in complex systems, are responsible for counter-intuitive behaviors that sabotage the best intentions of decision makers (Langhe, Puntoni & Larrick, 2017; Sterman, 2000). Examples in the context of malls are the time necessary to understand a change in consumer preferences and, in the case of nonlinearities, the effect that the growth in online shopping may have on the sales of physical stores – little, if any, in the beginning, and progressively stronger.

Figure 1 presents a simplified version of the model. The full model can be seen in the Appendix 1. There is a major feedback loop linking the dynamic capabilities of the managing organization to the mall's attributes, its perceived attractiveness, the corresponding flow of consumers, the degree of occupation, and the revenues that close the circuit. That feedback loop can either be a virtuous

or a vicious cycle due to its reinforcing nature: the better (worse) the malls' attributes, the greater (lower) its perceived attractiveness and so on. There is another loop in the model: the spiral of death. It is dormant when business runs smoothly but it can wreak havoc in a mall when the flow of consumers suddenly drops and stores start closing.

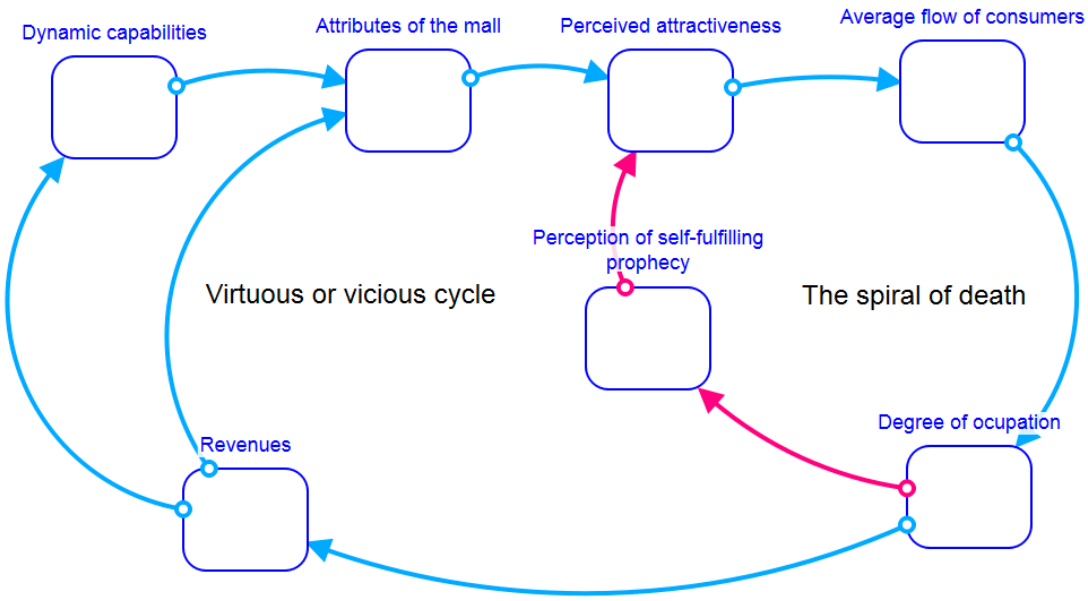


Figure 1. Simplified model of dynamic context of a shopping mall

The attributes of a mall represented in the model are physical atmosphere, mix of shops, mix of experiences and other factors. Perceived attractiveness is a function of these attributes as well as location (place and convenience) and the satisfaction of other consumer needs (e.g., safety).

The temporal horizon for the model is 30 years, starting somewhere between the end of the 80's and the beginning of 90's. The purpose is to represent a shopping mall conceived under different consumer needs (e.g., less importance of demand for experiences) that will face different scenarios over time. We assume that a mall starts the simulation under well-managed conditions and an adequate set of attributes. Table 2 presents the initial parameters for the major variables in the base simulation run. All variables listed in the table have measures ranging from zero to 1, reflecting the degree to which they approximate the maximum value (1). For instance, an organization with the highest degree of dynamic capabilities (e.g., Google) would have the value of 1. As said before, there are some cases of nonlinear relationships in the model. One example is the effect of number of shops on dynamic capabilities, which is assumed to have an optimal range: a failing mall can negatively impact those capabilities (for instance, when the best employees leave), while a fully occupied mall can lead to some degree of complacency in its management team.

Table 2. Initial parameters for the model.

Variable	**Definition**	**Initial value**
Dynamic capabilities	Managerial capabilities to sense opportunities, threats; innovate and adapt in a timely fashion	0.8
Mix of shops	Combination of percentage of occupation and variety of shops	0.8

Mix of experiences	Availability of suppliers of experiences such as cinemas, restaurants and other services	0.5
Physical atmosphere	Pleasantness of physical settings and its adequacy to current aesthetic preferences	1
Other factors	All other factors that influence attractiveness such as periodic promotions and offers of complimentary services	1
Perceived attractiveness	The weighed averaged combination of the factors attracting consumers to the mall, including its location (convenience)	1
Real/potential flow of consumers	Average flow of consumers compared to the market potential	80%
Percentage of occupation	Number of shops relative to the mall's potential	80%

The measurement of the variables depicted in the model can be accomplished through periodic monitoring of consumers' perception, hard measures (such as the approximate flow of people) and the number of innovation projects undertaken by management (among other indicatives of dynamic capabilities).

5. Scenarios

First, we present the base run simulation (Figure 2), which fits the Brazilian context, in which shopping malls are considered islands of safety. Therefore, safety needs have a stronger weight in the mall's perceived attractiveness when compared to the context found in developed countries. The simulation illustrates a situation in which the development of a new shopping mall is successful: occupation is virtually at its maximum, attractiveness decays over time but remains in the positive zone and dynamic capabilities, in a context of full occupation of the mall, decreases slightly due to a sense of security or even complacency. Business is good. In the simulation, the decay of attractiveness is due mostly to an increase in the preference of the public for more experiences – the mall starts its mix of experiences at the mid-range. The model assumes a gradual increase in the desire for more experience starting at the fifth year of the simulation and continuing for the entire period. At the end of the simulation, the weight of experiences in the mall's attractiveness rivals the one for location. The base-run assumes that management is not immune to that trend and the mix of experiences reaches 0.7 at the end of the period.

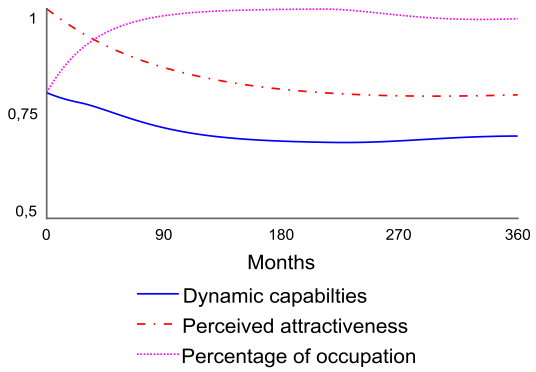


Figure 2. Base run scenario: Business is good

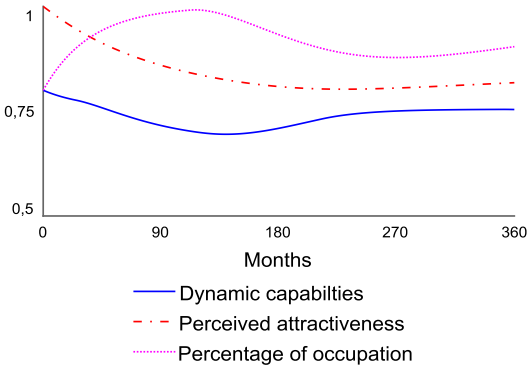
In this paper, we do not strive for empirical replication of a specific market. Instead, we adopt the goal of submitting our model to a proof of concept to explore five scenarios. This methodological stance implies we set the parameters of the model with the goal of replicating common disturbances found in the complex social system under analysis. The scenarios are listed in table 3.

Table 3. Scenarios and their rationale

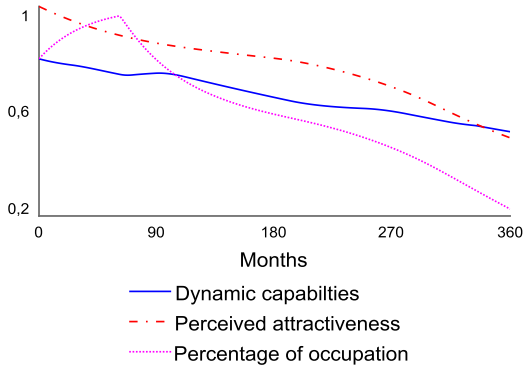
Scenario	**Rationale**
1. Increase in competition	Shopping malls in the USA that cater to lower income segments are at an increased risk of closure due to competition with outlets and online shopping. The scenario also represents competition in saturated markets and competition with other retail formats.
2. Increase in online shopping	Perhaps the greatest threat to malls in mature markets where logistics and distribution work smoothly.
3. Economic turbulences	Recessions and periods of economic euphoria influence the type, frequency and profile of spending.
4. Combination of former scenarios	Malls, especially in the USA, seem to be living a paradigm shift. Hence, it is interesting to device a scenario that combines elements of a "perfect storm" to understand how the model – and how a real mall – would respond to such combined threats.
5. Combination of former scenarios with stronger resilience	The goal is to understand how greater degrees of resilience help in dealing with the threats combined in scenario 4.

5.1. Increase in competition.

In the first scenario, we consider an increase in the degree of competition starting at year 5. We ran two variants of the scenario, one with a slight increase in competition and the other with a harsher dispute for the same consumers (figures 3.a and 3.b). The model is highly sensitive to the degree of competition: a small to moderate competition does not lead to significant damage over the entire simulation and even keeps the level of dynamic capabilities in check. However, a harsher competition can wreak havoc in a mall. As the figure 3.b illustrates, it can activate the spiral of death depicted in figure 1. This is a clear example of a phenomenon exhibiting tipping points. The stronger the competition (above a certain level), the quicker the demise.



3.a Slight increase in competition

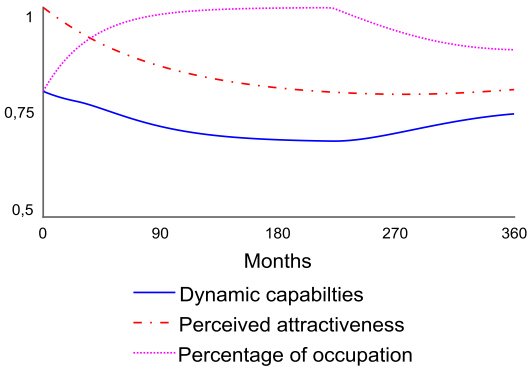


3.b Stronger increase in competition

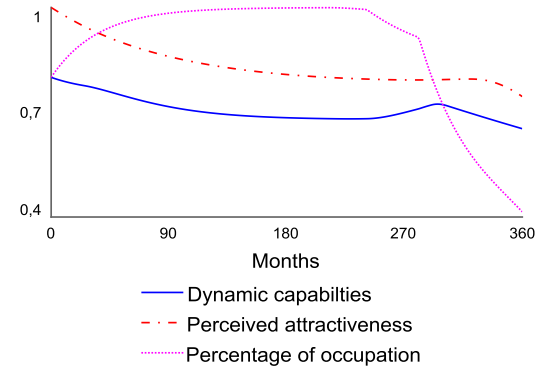
Figure 3. Increase in competition

5.2. Increase in online shopping

Starting in year 18 (roughly equivalent to 2008 in real world), we induce a progressive increase in the attractiveness in online shopping, reproducing a phenomenon that has been accelerated in the USA over the last years (figure 4.a). On the other hand, figure 4.b reproduces the common explanation of deaths of malls following the sudden closures of department stores (anchors), which rapidly lead to a sharp decrease in the flow of consumers and then the ensuing closure of smaller stores. According to that explanation, as online shopping becomes the dominant mode of buying products traditionally purchased in malls, such as clothes, it leads to a decline in the profits of chains of department stores, who then decide to close their least profitable units. In turn, the closure of such anchors destabilize malls that have low resilience. In the model, this condition activates the dormant feedback loop – the spiral of death – accelerating the mall's demise.



4.a Effects of online shopping



4.b Online shopping provoking the spiral of death

Figure 4. Increase in online shopping

5.3. Economic turbulences

We consider the occurrence of three cycles of ten years each. In each cycle, consumer's purchase power varies by increases or decreases of 10%. This an extreme scenario, especially regarding the downturns, which do not tend to be so extreme (with the exception of the recent recession in Brazil). Nevertheless, the scenario provides a useful proof of concept: what happens to a mall in a turbulent economy? During the first cycle, while the mall's attractiveness is still strong, the effects are milder. However, as attractiveness decay, the effects are stronger, fully reflecting the economic swings (figure 5). Nonetheless, the spiral of death loop remains dormant during the entire simulation. In other words, the model suggests that the average mall survives the turbulence.

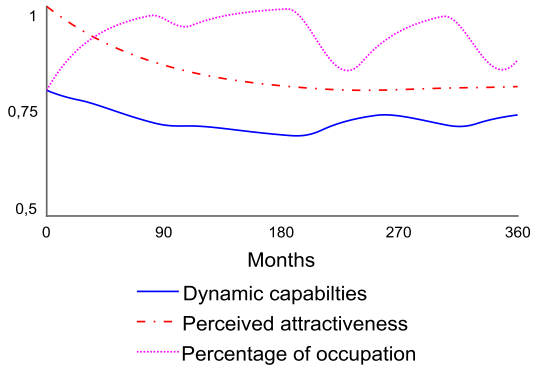


Figure 5. Economic turbulence

5.4. Combination of former scenarios

The situation is quite different when we combine the former three scenarios. We consider a scenario combining mild offline and online competition (scenarios depicted in figures 3.a and 4.a) and economic turbulences. The result (figure 6) is an expanding cycle of upturns and downturns that could activate the spiral of death loop in the model if continued for one more cycle (not shown in the simulation).

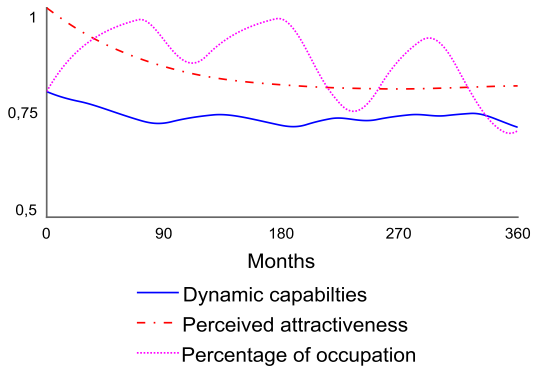


Figure 6. Combination of former scenarios

5.5. Combination with initial scenarios with stronger resilience.

The initial parameters of our model assume that other consumer needs (e.g., safety) and location are optimum. However – and this is the core of our proposition in this paper – the main element of resilience in the model is the presence of strong dynamic capabilities in the management body of a mall. As we started with a moderate to high level (0.8) we combine the scenario described above with a level of dynamics capabilities close to the maximum (0.95). The consequence from the presence of a top-notch management is that attractiveness remain high (higher than previous scenarios) and the extreme turbulence is damped, mitigating considerably the risk of death (figure 7).

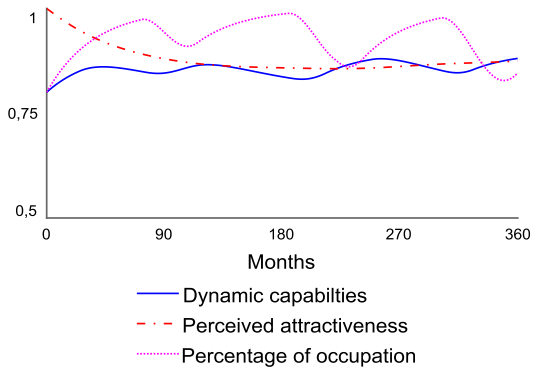


Figure 7. Combination of former scenarios with stronger resilience

6. Conclusion

This paper discusses an issue that has theoretical and practical relevance – the death of shopping malls. Economic, technological and behavioral changes have been modifying the retail landscape in the USA and there is no reason to expect that those changes will not affect countries like Brazil. By modelling the factors that can trigger the death of a mall and by discussing how some factors can increase resilience in this business ecosystem, the paper emphasizes the role of dynamic capabilities in the process of adaptation to diverse threats looming on the horizon of malls.

The model presented in the paper intends to reproduce the behavior of an individual mall. The results from the simulations suggest that it responds coherently to external pressures faced by malls in recent years. Shopping malls, and offline retail in general, are in the middle of a turbulent change of paradigm that will impact their value proposition. In a world where online shopping increasingly satisfies consumer needs and new generations redefine the relationships with brands and businesses, shopping malls need to adapt at faster rates or face the risk of dying. Staying competitive in this new environment requires the capacity to sense threats and opportunities and quickly propose, test and develop new alternatives.

In Brazil, shopping malls seem to have a higher degree of resilience since they are perceived as an oasis of safety – notwithstanding recent cases of crimes, especially against jewelries. They are also strongly associated with leisure. The Brazilian ecosystem of malls has a different configuration when compared to the USA, where malls are usually located in suburban areas and cater to a saturated market. Nonetheless, international trends, in particular those initiated in the USA, take

time to reach the Brazilian market, but they arrival is almost inevitable. New formats and new value propositions are on the radar of change in the American market. Brazilian malls should anticipate the effects of these trends.

Regarding limitations, the model presented in this paper does not account for a possible contamination effect, caused by a cultural change towards shopping malls. Consider the hypothesis (in the USA) of serial closures or retrofit processes, which could accelerate the change in shared worldviews, relegating the traditional concept of shopping malls to the past. It seems implausible, however, that the proposition of agglomerated services, experiences and shopping will be discarded due to a new paradigm of online shopping. Nonetheless, a cultural change that stigmatizes shopping malls can accelerate the demise of units with a small degree of resilience while forcing the survivors to search for a new distinguishing identity. Another limitation is the absence of effects of continuous economic growth on the building of new shopping malls. Such over-optimism can lead to saturation and influence competitiveness when the inevitable downturn occurs.

Avenues for future research include the validation of the model using data from malls and the development of a measure of resilience for malls that combines the elements discussed in this paper.

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Appendix. Full model

