Inflation Anchoring and Behavioural Tourism Demand

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Abstract

This paper develops a behavioural open-economy model to explain how inflation expectations influence international tourist demand. Unlike conventional frameworks that treat inflation as exogenous, our model embeds expectations directly in tourists' forward-looking decisions. When expectations are unanchored, perceived destination costs rise disproportionately, producing nonlinear declines in real tourism demand; when expectations remain anchored, spending stabilises. Extending the model to include cost rigidity and exchange rate flexibility shows that low credibility regimes amplify volatility as inflation pessimism links with depreciation risk. Our framework rationalises recent anomalies—such as sharp demand contractions in high inflation economies like Turkey in 2022—and complements empirical findings showing weak direct price elasticities in long-haul markets.

Keywords: tourism demand; inflation expectations; behavioural macroeconomics; forward-looking behavior; inflation targeting

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1. Introduction

The COVID-19 pandemic has reshaped global tourism patterns, introducing unprecedented volatility in both mobility and macroeconomic fundamentals. As borders reopen and travel gradually normalises, a new source of uncertainty has emerged: inflation. Across developed and emerging economies alike, the post-pandemic recovery has been accompanied by rising and unpredictable price levels, especially in services sectors such as hospitality, air transport, and accommodation — core components of tourism consumption. While traditional tourism models emphasise that relative prices and incomes are key demand drivers, far less attention has been paid to how tourists perceive and form expectations about future inflation when deciding where and how much to travel. This paper addresses the gap by introducing a behavioural macroeconomic perspective into tourism demand theory.

This behavioural dimension draws directly on forward-looking macroeconomic models with information frictions and bounded rationality. Our theoretical setup parallels the sticky-information model of Mankiw and Reis (2002) and the rational-inattention framework of Sims (2003), where agents update expectations infrequently or process information imperfectly. Recent extensions such as Gabaix (2020) emphasise that behavioural distortions can systematically amplify macroeconomic shocks. Applying these insights to international tourism, we treat tourists as forward-looking consumers who form imperfect expectations about future prices at the destination. Expectation rigidity and extrapolative beliefs therefore generate nonlinear responses of tourism demand to perceived inflation risk—consistent with the evidence of information rigidity documented by Coibion and Gorodnichenko (2015a). By embedding this behavioural channel in a simple open-economy setting, our paper provides one of the first micro-foundations of tourists' forward-looking decisions under subjective inflation risk and situates the analysis within the broader literature on adaptive learning and information-constrained agents.

We developed a theoretical model in which international tourists allocate income between domestic consumption and foreign tourism. Crucially, they base their decisions not only on current prices but also on subjective expectations of future inflation in destination countries. We distinguish between two regimes: i) an *anchored* regime, where tourists perceive price levels as stable and predictable, and ii) an *unanchored* regime, where tourists expect price volatility or systematically overreact to recent inflation. Our model shows that even modest behavioural distortions in inflation expectations can lead to contractions in real tourism demand. Furthermore, countries with credible inflation-targeting regimes are shown to experience more stable inbound tourism flows.

Our study connects and contributes to several strands of literature. First, we build on the large body of empirical work analysing the determinants of international tourism demand. Classical approaches often rely on gravity models or demand system estimation to quantify the effects of income, prices, and exchange rates on tourism flows (see Crouch, 1994; Song and Witt, 2000; Lim, 1997; Eilat and Einav, 2004). However, these models typically assume tourists are perfectly informed and respond only to realised relative prices, ignoring expectation formation and behavioural distortions. Second, we draw on the behavioural macroeconomics literature, particularly models of inflation expectations under information frictions. Recent inflationary surges have exposed a critical vulnerability in tourism-dependent economies: even modest price fluctuations can deter visitors if perceived as persistent. Behavioural economics suggests that tourists, like other economic agents, rely on heuristics to forecast prices (Gabaix, 2020). When inflation expectations become unanchored — due to weak central bank credibility or extrapolative beliefs — tourists may overestimate future costs, distorting their consumption decisions. For example, a 10% inflation shock in a destination with unanchored expectations could trigger a demand drop exceeding 20% (see Section 2), a nonlinearity absent from conventional models. Yet, existing tourism demand frameworks (e.g., the almost ideal demand system of De Mello *et al.*, 2002) typically assume rational expectations, ignoring how subjective inflation risk alters behaviour. There are a number of influential contributions in monetary policy design and inflation forecasting, including the sticky information model of Mankiw and Reis (2002), the rational inattention framework of Sims (2003), and evidence on expectation biases in both consumers and professionals (Coibion and Gorodnichenko, 2015b). Nevertheless, the implications of these models for real-sector behaviour, such as tourism, have not been formally explored. Third, our work complements studies on the effects of macroeconomic stability and institutional credibility on tourism performance. For instance, Tiwari *et al.* (2019) and Aloui *et al.* (2021) find that political and economic stability influence destination attractiveness, but do not model inflation credibility or expectations per se. So far, no studies have examined the effects of macroeconomic risk perception on tourists' destination choices.

In this study, we argue that macroeconomic risks, especially inflation volatility and the credibility of monetary institutions, play a pivotal role in shaping tourists' forward-looking behaviour. International travel often involves pre-booking, long planning horizons, and exposure to price risk across currencies and jurisdictions. As such, tourists form expectations about future costs at their destination, and these expectations are influenced not only by historical prices but also by macroeconomic signals, such as inflation rates, central bank communication, and perceived policy stability. Our study brings these macroeconomic elements to the forefront, positioning them as core determinants of international tourism behaviour under uncertainty.

Our paper makes three main contributions. First, we developed a theoretical model that incorporates inflation expectation regimes — anchored vs. unanchored — into tourists' decision-making. Second, we show that expectation distortion acts as an endogenous wedge on real tourism prices, generating asymmetric responses to inflation even under constant nominal conditions. Third, we use calibrated numerical simulations to illustrate the nonlinear impact of behavioural unanchoring on tourism demand and highlight the stabilising role of inflation credibility. Despite the extensive empirical literature on tourism demand, standard rational-expectations models—such as gravity or demand-system frameworks—struggle to explain several post-pandemic anomalies. In particular, economies that experienced rapid inflation and exchange-rate depreciation, such as Turkey in 2022, saw disproportionately sharp declines in international arrivals even after accounting for income and relative-price effects (World Tourism Organization, 2023). By contrast, destinations with credible inflation-targeting regimes, such as Switzerland, maintained stable inflows despite global price volatility. Our model provides a behavioural explanation for these anomalies: when inflation expectations become unanchored, tourists systematically overstate future costs, leading to a nonlinear contraction in real tourism demand. In this sense, our model extends beyond conventional utility-maximisation approaches by embedding expectation formation and credibility into the core determinants of tourism competitiveness.

The rest of the paper is structured as follows. Section 2 presents the baseline theoretical model. Section 3 extends it to general equilibrium. Section 4 concludes and discusses policy implications for inflation targeting in tourism-dependent economies.

2. Model

2.1 Set up

We initially assume a fixed exchange rate regime or a monetary union between home and destination countries to isolate the effect of inflation expectations, an assumption we relax in subsection 2.4. We developed a stylised model to examine how inflation anchoring influences international tourism demand through tourists' expectations. The model features a representative tourist who allocates income between domestic consumption and a tourism good priced in foreign currency. Expectations about future prices at the destination play a central role in determining real tourism demand.

Consider a tourist residing in the home country (H), with nominal income (I), who chooses how much to allocate to domestic consumption C_H and international tourism consumption C_D. Let M denote nominal spending on tourism. We define inflation expectations over the future travel horizon rather than as an instantaneous distortion of the current price level. The current price level of tourism services in the destination country (D) is denoted by P_D, and $\mathbb{E}_t[P_{t+h}(D)]$ represents the tourist's expectation of the future price level at the time of travel, where h is the booking horizon (e.g., three to six months ahead). Accordingly, expected inflation over this horizon is $\pi_t^e = \ln\left(\frac{\mathbb{E}_t[P_{t+h}(D)]}{P_t(D)}\right)$. The tourist derives utility from both types of consumption and forms expectations about the real value of tourism based on the expected price level. The utility function is:

$$U = \ln(C_H) + \theta \mathbb{E}_t[\ln(C_D)], \tag{1}$$

where $0 < \theta < 1$ captures the relative preference for international travel, and expectations are taken with respect to the foreign tourism consumption good. The tourist faces the following constraints:

$$C_H = I - M, \tag{2}$$
$$C_D = \frac{M}{P_D^e}, \tag{3}$$

We consider two regimes for inflation expectations in the destination country: i) anchored expectations that tourist perceives inflation to be stable and well controlled, such that $\mathbb{E}_t[P_{t+h}(D)] = P_t(D)$; ii) unanchored expectations that the tourist extrapolates recent price movements or overreacts to inflation news, forming expectations $\mathbb{E}_t[P_{t+h}(D)] = P_t(D)e^{\delta}$, where $\delta > 0$ represents an expectation distortion parameter capturing the perceived cumulative inflation between t and $t+h$. Thus, δ corresponds to a biased inflation expectation rather than a direct markup on the current price level.

2.2 Optimization

Substituting the constraints into the utility function yields the tourist's problem[1]:

$$\max_{M \in (0,I)} \ln(I - M) + \theta \ln\left(\frac{M}{P_D^e}\right), \tag{4}$$

The first order condition (FOC) with respect to M is:

$$\frac{-1}{I-M} + \theta \cdot \frac{1}{M} = 0 \Rightarrow M^* = \frac{\theta I}{1+\theta}. \tag{5}$$

Substituting the optimal M^* into the consumption of the tourism good gives the equilibrium real tourism demand:

[1] The optimisation problem in Equation (4) can also be interpreted as the reduced form of a two-period intertemporal utility framework consistent with the constraints in Equations (2)-(3). Specifically, at time t, a tourist allocates income I between domestic consumption and nominal tourism expenditure M, such that $C_H = I - M$ and $C_D = \frac{M}{\mathbb{E}_t[P_{t+h}(D)]}$. Here $\mathbb{E}_t[P_{t+h}(D)] = P_t(D)e^{\delta}$ represents the expected destination price level over the booking horizon h. A more general two-period version would therefore be:

$$\max_{M_t, M_{t+h}} U(C_H^t, C_D^{t+h}) \quad s.t. \quad C_H^t = I - M_t, \quad C_D^{t+h} = \frac{M_{t+h}}{\mathbb{E}_t[P_{t+h}(D)]}$$

Advance bookings correspond to M_t contracted at $P_t(D)$, while deferred expenditures correspond to M_{t+h} subject to expectation inflation. Our single-period model thus represents the limiting case where M_{t+h} dominates (i.e., consumption occurs primarily at the destination), making perceived inflation the key determinant of real tourism demand.

$$C_D^* = \frac{M^*}{P_D^e} = \frac{\theta I}{(1+\theta) P_D^e}. \tag{6}$$

We can now express the equilibrium tourism demand under the two expectation regimes. Specifically, for anchored expectations, we have:

$$C_D^{anchored} = \frac{\theta I}{(1+\theta)\bar{P}_D}. \tag{7}$$

While for unanchored expectation, we have:

$$C_D^{unanchored} = \frac{\theta I}{(1+\theta) P_D e^{\delta}}. \tag{8}$$

We therefore have the following propositions.

Proposition 2.1 (Inflation expectations reduce tourism demand). *Tourism demand is inversely related to expected prices:* $\frac{\partial C_D^*}{\partial P_D^e} < 0$.

Proof. From the optimal allocation derived in Equation (6), the real tourism demand is:

$$C_D^* = \frac{\theta I}{(1+\theta) P_D^e}.$$

Taking the partial derivative with respect to P_D^e yields:

$$\frac{\partial C_D^*}{\partial P_D^e} = -\frac{\theta I}{(1+\theta)(P_D^e)^2} < 0,$$

Since all parameters are positive. This confirms that expected inflation at the destination reduces real tourism demand.

Proposition 2.2 (Anchoring stabilises tourism flows). *If expectations are anchored, i.e.,* $P_D^e = \bar{P}_D$, *then tourism demand is invariant to actual inflation at the destination.*

Proof. Under anchored expectations, we have $P_D^e = \bar{P}_D$, where $\bar{P}_D$ is a fixed constant, independent of the realised price level P_D. Then the real tourism demand becomes:

$$C_D^{anchored} = \frac{\theta I}{(1+\theta)\bar{P}_D}.$$

Because $\bar{P}_D$ is constant, it follows that:

$$\frac{\partial C_D^{anchored}}{\partial P_D} = 0.$$

This implies that tourism demand does not respond to transitory inflation shocks when expectations are anchored.

Proposition 2.3 (unanchored expectations amplify volatility). *Under unanchored expectations,* $P_D^e = P_D \cdot e^{\delta}$ *with* $\delta > 0$, *tourism demand is more sensitive to inflation shocks, and the elasticity of tourism demand with respect to* P_D *increases with* δ.

Proof. Under unanchored expectations, real tourism demand is:

$$C_D^{unanchored} = \frac{\theta I}{(1+\theta)P_D e^{\delta}}.$$

Taking logarithms on both sides of the equation, get:

$$lnC_D^{unanchored} = ln\frac{\theta I}{(1+\theta)} - lnP_D - \delta.$$

Differentiating with respect to lnP_D and δ yields:

$$\frac{d\ lnC_D^{unanchored}}{d\ lnP_D} = -1, \qquad \frac{d\ lnC_D^{unanchored}}{d\ \delta} = -1.$$

The first derivative is the price elasticity of real tourism demand, indicating that a 1% increase in the actual tourism price P_D leads to a 1% decrease in real tourism demand.[2] The semi-elasticity $\frac{d\ lnC_D^{unanchored}}{d\ \delta} = -1$ captures the additional negative impact from behavioural inflation, pessimism, or expectation shocks.

Therefore, the effect of actual inflation on tourism demand is:

$$\frac{\partial C_D^{unanchored}}{\partial P_D} = -\frac{\theta I}{(1+\theta)P_D^2 e^{\delta}} < 0,$$

And the magnitude of this derivative increases with δ. Hence, the unanchored regime induces greater sensitivity of tourism demand to price--level movements, amplifying volatility.

2.3 Calibration

To illustrate the quantitative implications of the model, we calibrate the key parameters using plausible values from the tourism and macroeconomic literature. The goal is to demonstrate how real tourism demand responds under anchored and unanchored inflation expectation regimes. Table 1 shows the baseline parameter values we set.

From Table 1, we can get the optimal nominal expenditure on tourism is constant and given by:

$$M^* = \frac{\theta I}{1+\theta} = \frac{0.5 \times 10{,}000}{1+0.5} = 3{,}333.33.$$

Recall that the real tourism demand is computed as: $C_D^* = \frac{M^*}{P_D^e}$. We then evaluate C_D^* under both expectation regimes which is shown in Table 2.

[2] The elasticity $\frac{d\ lnC_D^{unanchored}}{d\ lnP_D} = -1$ quantifies how responsive demand is to actual price increases.

Table 1: Baseline parameter calibration

Parameter	Description	Value
I	Tourism income (home currency unit)	10,000
θ	Preference weight on tourism	0.5
$\bar{P}_D$	Anchored expected price level	100
P_D	Actual destination price level (initial)	100
$P_D{}'$	Actual price level (post-inflation)	120
δ	Perceived cumulative inflation over horizon h	{0.00, 0.10, 0.25, 0.50}

Table 2 reports how forward-looking inflation expectations affect tourism demand when tourists plan travel over a short horizon. Under anchored expectations ($\delta = 0$), tourists anticipate no change in future prices, and real tourism demand remains stable even after an actual 20% rise in current prices (33.33 to 27.78). By contrast, under unanchored expectations, tourists overestimate future prices by a factor of e^{δ}, producing nonlinear contractions in expected real demand (e.g., from 26.0 to 21.67 when $\delta = 0.25$). These results confirm that the relevant behavioural margin is expected inflation rather than the contemporaneous price level.

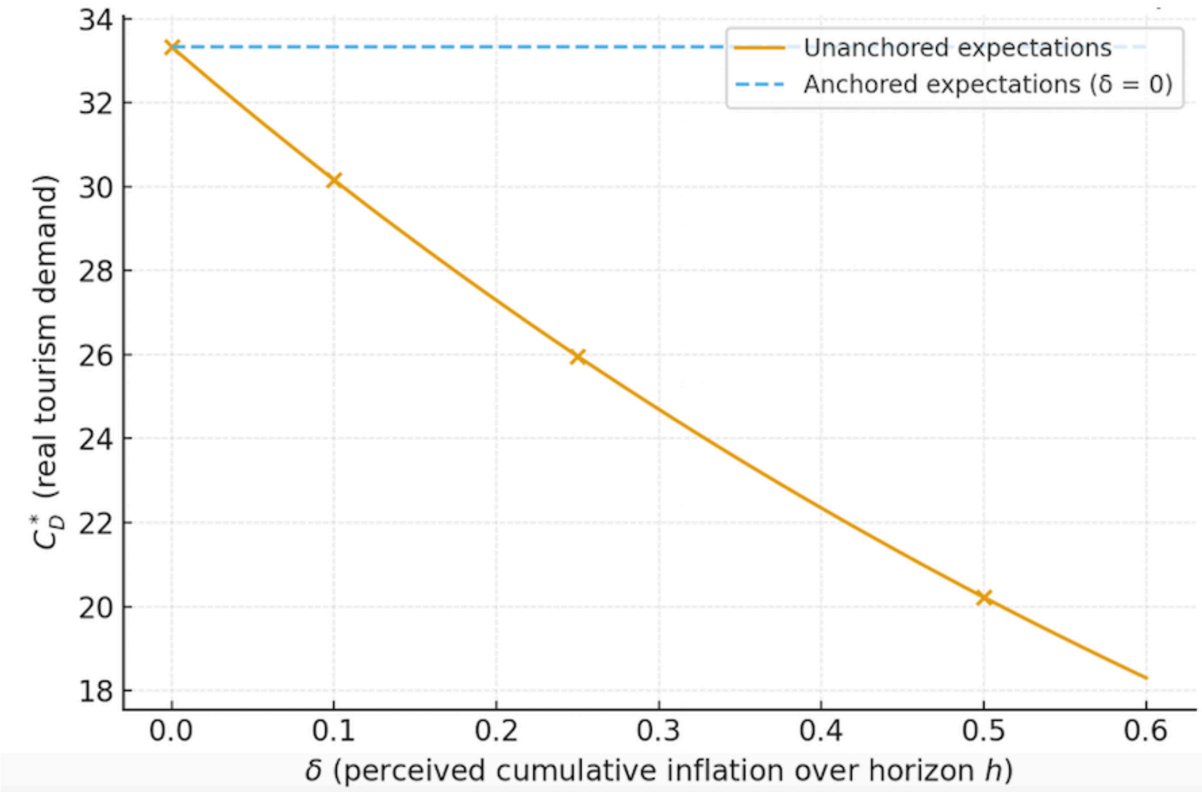
Table 2: Real tourism demand under anchored and unanchored expectations

Scenario	$P_t(D)$	δ	C_D^*
Anchored expectations	100	-	33.33
Unanchored (mild)	100	0.10	30.23
Unanchored (moderate)	100	0.25	26.00
Unanchored (strong)	100	0.50	20.22
Anchored (post-inflation)	120	-	27.78
Unanchored (post-inflation, $\delta = 0.25$)	120	0.25	21.67

Note: $P_t(D)$ denotes the current tourism price level; δ is the perceived cumulative inflation over the booking horizon h, such that $\mathbb{E}_t[P_{t+h}(D)] = P_t(D)e^{\delta}$.

Figure 1 compares the expected real tourism demand derived from C_D^*across anchored and unanchored regimes. The blue dashed line ($\delta = 0$) represents anchored expectations, where tourists forecast stable future prices and demand remains constant at 33.33. The orange curve depicts unanchored expectations, where tourists perceive higher future inflation over the travel horizon. Even modest expectation biases ($\delta = 0.10$) reduce expected real demand to about 30, while larger distortions ($\delta \geq 0.50$) cause steep nonlinear declines below 21. The curvature of the orange line reflects that behavioural over-reaction amplifies perceived inflation risk, not actual price levels—highlighting that anchoring mechanisms work through stabilising expected future price rather than holding current $P_t(D)$ fixed.

Figure 1: Tourism demand under unanchored vs. Anchored expectations



Note: Real tourism demand C_D^* as a function of perceived cumulative inflation $\delta = \ln\left(\frac{\mathbb{E}_t[P_{t+h}(D)]}{P_t(D)}\right)$.

While our model emphasises short-horizon decision marking—such as booking and expenditure choices made under current information—tourists' inflation expectations are not assumed to be permanently biased. In practice, expectations are likely adaptive: as actual inflation stablises, perceived inflation gradually converges to realised outcomes, reducing the bahavioural distortion δ over time. Hence, the temporary decline in tourism demand following an inflation shock would tend to be partially reversed in the medium term.[3]

2.4 Discussion: the role of exchange rate regimes

The baseline model presented in subsections 2.1 to 2.3 implicitly assumes a fixed exchange rate regime or a monetary union between the tourist's home country and the destination. This simplification, denoted by an exchange rate of $S = 1$, allowed us to isolate the direct effect of inflation expectations P_D^e on tourism demand without the additional channel of currency valuation. We acknowledge that this is a strategic

[3] Incorporating such adaptive learning dynamics would further strengthen our model's realism but does not alter its central insight—that weakly anchored expectations magnify short-term volatility in international tourism demand.

simplification to clearly identify the behavioral expectations channel, but recognize that exchange rate flexibility is a critical mechanism in international tourism.

In reality, the price facing an international tourist is a function of both the destination's price level and the nominal exchange rate. The tourist's budget constraint for the tourism good should be expressed in their home currency as:

$$C_D = \frac{M}{S^e \cdot P_D^e}$$

where S^e is the tourist's expectation of the future nominal exchange rate (defined as units of home currency per unit of destination currency). The relevant measure for the tourist's decision is therefore the expected real exchange rate, $Q^e = S^e P_D^e / P_H$, where P_H is the home country price level.

One may argue that in countries with flexible exchange rates and credible central banks, an increase in destination country's inflation P_D is often offset by a nominal depreciation (an increase in S), stabilizing the cost $S \cdot P_D$ for foreign tourists. Under rational expectations and efficient markets, this mechanism would mute the pass-through of inflation to tourism demand, potentially mitigating the effects described in our baseline model.

However, our behavioral macroeconomic perspective suggests that the interaction between inflation anchoring and exchange rate expectations can amplify rather than diminish our core results in contexts of low credibility. The critical insight is that the formation of S^e is also subject to behavioral distortions, especially during periods of macroeconomic instability.

Under anchored expectations: A credible inflation-targeting regime fosters stability in both price and currency forecasts. Tourists may rationally anticipate that any rise in P_D will be met with policy responses that lead to currency stability or appreciation, reinforcing a stable expected real exchange rate Q^e. This aligns with and strengthens Proposition 2.2 on the stabilizing effect of anchoring.

Under unanchored expectations: In a low-credibility environment, tourists are likely to perceive high inflation and currency weakness as correlated and persistent risks. Behavioral heuristics (e.g., extrapolative beliefs) could lead them to overestimate both future inflation ($P_D^e = P_D e^{\delta}$) and future depreciation ($S^e = S e^{\gamma}$), where $\gamma > 0$ captures overreaction in currency expectations. This compounds into a larger distortion of the total expected cost:

$$S^e P_D^e = (S e^{\gamma})(P_D e^{\delta}) = S P_D e^{\gamma+\delta}$$

The resulting real tourism demand would be:

$$C_D^* = \frac{M^*}{S P_D e^{\gamma+\delta}} = \frac{\theta I}{(1+\theta) S P_D e^{\gamma+\delta}}$$

This implies that the negative impact on demand is more severe than in the baseline model, which only captured the inflation distortion δ. The elasticity of demand with respect to the behavioral distortion parameter would be greater than -1.

Therefore, while the exchange rate channel can act as a stabilizer under conditions of full credibility and rational expectations, it may serve as an amplifier of perceived macroeconomic risk in the behavioral context we emphasize. For many tourist-dependent emerging economies, where central bank credibility is evolving and foreign exchange markets are less deep, this behavioral amplification is a significant risk. Our baseline model thus provides a conservative estimate of the potential negative impacts of unanchored inflation expectations, and the core policy implication—that macroeconomic credibility is a cornerstone of tourism competitiveness—is reinforced when considering exchange rate dynamics.

A further consideration relates to the timing of tourism decisions, as many international tourism services are booked and paid for in advance. When high inflation is anticipated, some tourists may accelerate their bookings to secure current prices—a "buy-now, before it gets worse" response—rather than postponing travel. This behaviour can be integrated within our framework by recognising that pre-payment effectively shortens the expectation horizon h, since part of the expenditure is locked in at nominal prices before inflation materialises. The corresponding distortion term then becomes $\delta_h < \delta$, implying a weaker behaviroural response to expected inflation. In contrast, for non-prepaid or flexibly-priced components such as local food, and on-site services, the full inflation expectation still applies. Hence, while advance contracting may temporarily offset the contractionary effect of inflation expectations, our model continues to capture the more general equilibrium outcome in which unanchored expectations ultimately reduce real tourism consumption once realised prices adjust. This distinction between pre-booked and flexible expenditures also helps explain the empirical coexistence of short-term booking surges and medium-term demand declines in high-inflation contexts.

Our framework can be interpreted as a behavioural open-economy variant of the two-good intertemporal model with nominal stickiness (Mankiw and Reis, 2002; Sims, 2003; Gabaix, 2020). By introducing a perceived inflation distortion within tourists' forward-looking optimisation, the model captures how subjective price expectations interact with exchange rate regimes in shaping real tourism demand. Under flexible exchange rate arrangements, the expected nominal depreciation $\mathbb{E}_t[S_{t+h}]$ partly offsets domestic inflation in the foreign currency price of tourism services, thereby reducing the perceived cost of travel of foreign visitors. Conversely, in less credible or de-anchored regimes, inflation and depreciation expectations become correlated, amplifying perceived price uncertainty and depressing tourism expenditure. This behavioural channel complements standard small-open-economy general equilibrium frameworks with nominal rigidities (Clarida, Galí and Gertler, 2002; Galí and Monacelli, 2005; Woodford 2003) by incorporating bounded rationality and expectation inertia in the spirit of Coibion and

Gorodnichenko (2015a) and de Grauwe (2012). In doing so, our model helps explain empirical anomalies in inflation-tourism linkages that rational-expectations model cannot reconcile. It therefore establishes a coherent bridge between the literatures on expected anchoring, nominal rigidity, and international tourism behaviour.

3. Model Extension

We now extend the baseline framework to incorporate a simple general-equilibrium feedback between tourism demand local price dynamics. The purpose of this extension if not to model market clearing in full, but to capture how inflation inertia and cost pass-through can interact with tourists' inflation expectations.

3.1 Set up

Consider a small open economy that produces two goods: a tourism good and a non-tourism good. Foreign tourists allocate income between domestic consumption and tourism services in the destination country. Expectations about the destination's future prices continue to follow the two regimes defined earlier: i) anchored expectations: where inflation is credibly constrained and $\mathbb{E}_t[P_{t+h}(D)] = P_t(D)$; and ii) unanchored expectations: where tourists extrapolate recent inflation overreact to price signals, forming $\mathbb{E}_t[P_{t+h}(D)] = P_t(D)e^{\delta}$, with $\delta > 0$ denoting expectation distortion.

Unlike the baseline model, the price of tourism services is now endogenously determined by a sluggish cost-adjustment mechanism rather than fixed exogenously. Specifically, the short-run price level evolves as:

$$P_D = \bar{P}\left[1 + \psi(C_D - \bar{C}_D)\right], \tag{9}$$

where $\bar{P}$ is the long-run (steady-state) tourism price, $\bar{C}_D$ denotes the equilibrium level of real tourism demand, and $\psi > 0$ measures the degree of cost and price responsiveness to deviations of actual demand from capacity. When $C_D > \bar{C}_D$, congestion and resource pressures push costs upward; when $C_D < \bar{C}_D$, prices adjust only gradually downward because of nominal rigidities, menu costs, and contractual stickiness common in the tourism sector. This formulation ensures that the feedback operates through short-run inflation inertia.

Foreign tourists maximise expected utility:

$$U = (I - M)^{1-\alpha}(C_D)^{\alpha}, \tag{10}$$

subject to

$$C_D = \frac{M}{\mathbb{E}_t[P_{t+h}(D)]}, \quad \mathbb{E}_t[P_{t+h}(D)] = P_D e^{\delta}. \tag{11}$$

3.2 Optimization

Substituting (11) into (10) yields the objective function in terms of the choice variable M:

$$\max_{M}(I-M)^{1-\alpha}(\frac{M}{P_D e^{\delta}})^{\alpha}. \tag{12}$$

The first order condition gives the optimal nominal tourism expenditure:

$$M^{*}=\frac{\alpha I}{1+\alpha}. \tag{13}$$

Substituting M^{*} into the constraint (11) and using Equation (9), we obtain the equilibrium real tourism demand:

$$C_D^{*}=\frac{M^{*}}{\mathbb{E}_t[P_{t+h}(D)]}=\frac{\alpha I}{(1+\alpha)\bar{P}\left[1+\psi(C_D^{*}-\bar{C}_D)\right]e^{\delta}}. \tag{14}$$

Equation (14) defines a fixed-point problem in C_D^{*}. Multiplying through and rearranging yields a quadratic form:

$$\psi e^{\delta}(C_D^{*})^2+\left[\bar{P}e^{\delta}(1+\alpha)-\psi\bar{C}_D e^{\delta}\right]C_D^{*}-\tfrac{\alpha I}{\bar{P}}=0. \tag{15}$$

The positive root gives the unique interior equilibrium:

$$C_D^{*}=\frac{-\left[\bar{P}e^{\delta}(1+\alpha)-\psi\bar{C}_D e^{\delta}\right]+\sqrt{\left[\bar{P}e^{\delta}(1+\alpha)-\psi\bar{C}_D e^{\delta}\right]^2+4\psi e^{\delta}(\frac{\alpha I}{\bar{P}})}}{2\psi e^{\delta}}. \tag{16}$$

Proposition 3.1 (Existence and uniqueness). *Let* $I>0$, $\alpha\in(0,1)$, $\bar{P}>0$, $\bar{C}_D>0$, $\delta\geq 0$, *and* $\psi\geq 0$. *With prices set by:*

$$P_D=\bar{P}\left[1+\psi(C_D-\bar{C}_D)\right],$$

and the optimal tourism expenditure $M^{*}=\frac{\alpha I}{1+\alpha}$, *the equilibrium real tourism demand* C_D^{*} *is the (unique) positive solution to:*

$$C_D\left[1+\psi(C_D-\bar{C}_D)\right]e^{\delta}=\frac{\alpha I}{(1+\alpha)\bar{P}}\equiv K>0. \tag{A1}$$

A unique $C_D^{*}>0$ *exists for all admissible parameter values.*

Proof. Rewrite (A1) as a quadratic in $C\equiv C_D$:

$$\underbrace{\psi e^{\delta}C^2}_{a>0}+\underbrace{e^{\delta}(1-\psi\bar{C}_D)C}_{b}-\underbrace{K}_{c<0}=0. \tag{A2}$$

If $\psi=0$, Equation (A2) reduces to $e^{\delta}C=K$, so $C_D^{*}=Ke^{-\delta}>0$ is unique.

If $\psi>0$: $a>0$, $c<0$. Hence the product of the two roots equals $\frac{c}{a}=\frac{-K}{\psi e^{\delta}}<0$. Therefore the two real roots have opposite signs. The discriminant,

$$\Delta=b^2-4ac=e^{2\delta}\left(1-\psi\bar{C}_D\right)^2+4\psi e^{\delta}K>0,$$

is strictly positive, so both roots are real. Since one root is negative and the other positive, there is exactly one positive root. Denote it by C_D^{*}.

Alternatively, define $f(C) = \psi e^{\delta} C^2 + e^{\delta}\big(1 - \psi\bar{C}_D\big)C - K$. Then $f(0) = -K < 0$ and $\lim_{c\to\infty} f(C) = +\infty$; with f strictly convex ($f''^{(C)} = 2\psi e^{\delta} \geq 0$), there is exactly one crossing with the horizontal axis on $C > 0$.

Proposition 3.2 (Comparative statics: expectations depress demand; rigidity attenuates the effect). *Let $C_D^*(\delta, \psi)$ be the unique positive solution to (A2). Then:*

1. *For every $\psi \geq 0$, $\frac{\partial C_D^*}{\partial \delta} < 0$ (inflation-expectation distortion lowers real tourism demand).*
2. *For every $\delta > 0$, $\frac{\partial C_D^*}{\partial \psi} > 0$ (greater cost-feedback rigidity raises equilibrium demand, i.e., attenuates the demand decline caused by δ).*

Proof. Let $f(C, \delta, \psi) = \psi e^{\delta} C^2 + e^{\delta}\big(1 - \psi\bar{C}_D\big)C - K$. By Proposition 3.1, the equilibrium $C = C_D^*$ satisfies $f(C, \delta, \psi) = 0$ with $C > 0$. The implicit-function theorem applies because:

$$f_C(C, \delta, \psi) = e^{\delta}\big[2\psi C + \big(1 - \psi\bar{C}_D\big)\big] = e^{\delta} D(C, \psi),$$

and at the positive root of a strictly convex quadratic, $f_C > 0$ (the root lies to the right of the vertex). Hence, C_D^* is continuously differentiable in (δ, ψ) and

$$\frac{\partial C_D^*}{\partial x} = -\frac{f_z}{f_C}, \qquad x \in \{\delta, \psi\}.$$

(i) Effect of δ.
Compute

$$f_\delta(C, \delta, \psi) = \psi e^{\delta} C^2 + e^{\delta}\big(1 - \psi\bar{C}_D\big)C = e^{\delta}\,\underbrace{\big[\psi C^2 + \big(1 - \psi\bar{C}_D\big)C\big]}_{N(C,\psi)}$$

At equilibrium $f(C, \delta, \psi) = 0$ implies

$$\psi e^{\delta} C^2 + e^{\delta}\big(1 - \psi\bar{C}_D\big)C = K > 0 \quad\Longrightarrow\quad N(C, \psi) = K e^{-\delta} > 0.$$

Therefore $f_\delta = e^{\delta} N(C, \psi) > 0$, while $f_C = e^{\delta} D(C, \psi) > 0$. Hence,

$$\boxed{\frac{\partial C_D^*}{\partial \delta} = -\frac{f_\delta}{f_C} = -\frac{N(C, \psi)}{D(C, \psi)} < 0}$$

which proves part (1): higher inflation-expectation distortion reduces equilibrium real tourism demand.

(i) Effect of ψ.

Compute

$$f_\psi(C, \delta, \psi) = e^{\delta}\big[C^2 - \bar{C}_D C\big] = e^{\delta} C\big(C - \bar{C}_D\big).$$

For $\delta > 0$, the equilibrium satisfies $C_D^* < \bar{C}_D$ (indeed, with $\psi = 0$, $C_D^* = \bar{C}_D e^{-\delta} < \bar{C}_D$; adding rigidity cannot raise C_D^* above $\bar{C}_D$ when $\delta > 0$). Thus, $C\big(C - \bar{C}_D\big) < 0$, so $f_\psi < 0$. Because $f_C > 0$, we have:

$$\boxed{\frac{\partial C_D^*}{\partial \psi} = -\frac{f_\psi}{f_C} > 0 \qquad (\delta > 0)}$$

which proves part (2): stronger cost rigidity raises C_D^* for a given $\delta > 0$ (i.e., it attenuates the contraction caused by inflation-expectation distortion).

Finally, for completeness, note that when $\delta = 0$ one obtains $C_D^* = \bar{C}_D$ for all $\psi \geq 0$, so $\frac{\partial C_D^*}{\partial \psi} = 0$ at $\delta = 0$, consistent with our model.

Comparative statics imply a clear ranking. To be more specific, for any fixed $\delta > 0$, $C_D^*(\delta, \psi_2) > C_D^*(\delta, \psi_1)$ whenever $\psi_2 > \psi_1$; hence price rigidity dampens the adverse effect of unanchored expectations.

3.3 Calibration

To illustrate the quantitative implications of the cost-feedback extension, we calibrate the model using plausible parameter values consistent with tourism consumption under behavioural inflation expectations. The objective is to show how variations in the expectation-distortion parameter δ and the price-rigidity coefficient ψ jointly determine the equilibrium level of real tourism demand (C_D^*).

We assume a representative foreign tourist with nominal income $I = 10{,}000$ (home-currency units) and a preference weight $\alpha = 0.5$ for international tourism. The long-run baseline tourism price is normalised to $\bar{P} = 100$, yielding an equilibrium steady-state real tourism demand $\bar{C}_D = 33.33$ when expectations are anchored ($\delta = 0$). The feedback coefficient ψ measures the degree of short-run cost inertia or price rigidity, with values between 0 (perfect flexibility) and 0.02 (high rigidity). The four expectation-distortion values $\delta = \{0.00, 0.10, 0.25, 0.50\}$ represents, respectively, a fully anchored regime, mild deviation from target, moderate unanchoring, and severe inflation pessimism. Table 3 reports the baseline parameterisation.

Table 3: Calibrated parameter values for numerical illustration

Parameter	Description	Value
I	Tourism income (home currency unit)	10,000
α	Preference weight on tourism	0.5
$\bar{P}$	Long-run baseline tourism price	100
$\bar{C}_D$	Steady-state real tourism demand	33.33
M^*	Optimal tourism spending	3,333.33
δ	Inflation-expectation distortion	{0.00, 0.10, 0.25, 0.50}
ψ	Cost feedback (price-rigidity) coefficient	{0, 0.005, 0.01, 0.02}

Using Equation (16), we compute C_D^* for each combination of δ and ψ. When $\psi = 0$, price adjust instantaneously and the model collapses to the baseline flexible-price case $C_D^* = \bar{C}_D e^{-\delta}$. Table 4 summarises the equilibrium outcomes.

Table 4: Equilibrium real tourism demand C_D^* under varying δ and ψ

δ	$\psi = 0$	$\psi = 0.005$	$\psi = 0.01$	$\psi = 0.02$
0.00	33.33	33.33	33.33	33.33
0.10	30.17	30.58	30.96	31.45
0.25	25.94	26.59	27.11	27.83
0.50	20.22	21.07	21.82	22.95

In the absence of cost feedback ($\psi = 0$), perceived inflation (δ) leads to a proportional, exponential-type decline in real tourism demand, falling from 33.33 to 20.22 as δ rises from 0 to 0.5. When $\psi > 0$, prices adjust sluggishly. Specifically, the contraction in C_D^* becomes less proportional at low δ but more convex overall, meaning that strong inflation pessimism produces disproportionately large demand losses. For instance, at $\psi = 0.02$, the same increase in δ from 0 to 0.5 reduces C_D^* from 33.33 to 22.95, a 31% decline even with partial price rigidity.

The calibration therefore confirms the analytical result in Proposition 3.2: greater cost inertia amplifies the impact of unanchored inflation expectations, creating nonlinear and asymmetric responses of tourism demand. Destination with sticky prices, index-linked wages, or capacity constraints are thus more vulnerable to expectation shocks, while those with flexible pricing adjust smoothly and maintain higher demand stability.

Panel A of Figure 2 depicts how real tourism demand responds increasing inflation-expectation distortion under varying degrees of price rigidity. In the benchmark case of perfect price flexibility ($\psi = 0$), expectations are immediately reflected in perceived costs, leading to a sharp and almost exponential decline in C_D^* as δ rises. When some rigidity is introduced ($\psi > 0$), the downward slope becomes less steep. In particular, moderate and high rigidity dampen the immediate sensitivity of tourism demand to expectation shocks.

Economically, this pattern illustrates that price adjustment frictions mitigate the behavioural impact of unanchored inflation expectations. When prices adjust sluggishly, consumers perceive part of the inflation shock as transitory, delaying or partially offsetting their cutback in tourism expenditure. The spread between the curves thus measures the degree of expectation attenuation—destination with higher cost rigidity experiences smaller short-run contractions in real tourism demand for the same inflation-expectation distortion. In this sense, ψ captures the stabilising effect of nominal stickiness in the tourism sector, consistent with the comparative statistics derived in Proposition 3.2.

Panel B of Figure 2 illustrates the nonlinear percentage change in real tourism demand relative to the baseline equilibrium ($\delta = 0$), as the inflation-expectation distortion parameter increases. All curves exhibit a pronounced downward curvature, confirming that the contraction in tourism demand accelerates with larger expectation shocks. This convex relationship indicates that small expectation deviations have limited impact, but once unanchored inflation expectation exceed moderate levels, their adverse effects on tourism consumption intensify sharply. Importantly, higher price-rigidity coefficients shift the curves upward, implying that destinations with more rigid pricing structures experience smaller proportional declines in tourism demand for the same inflation-expectation shock.

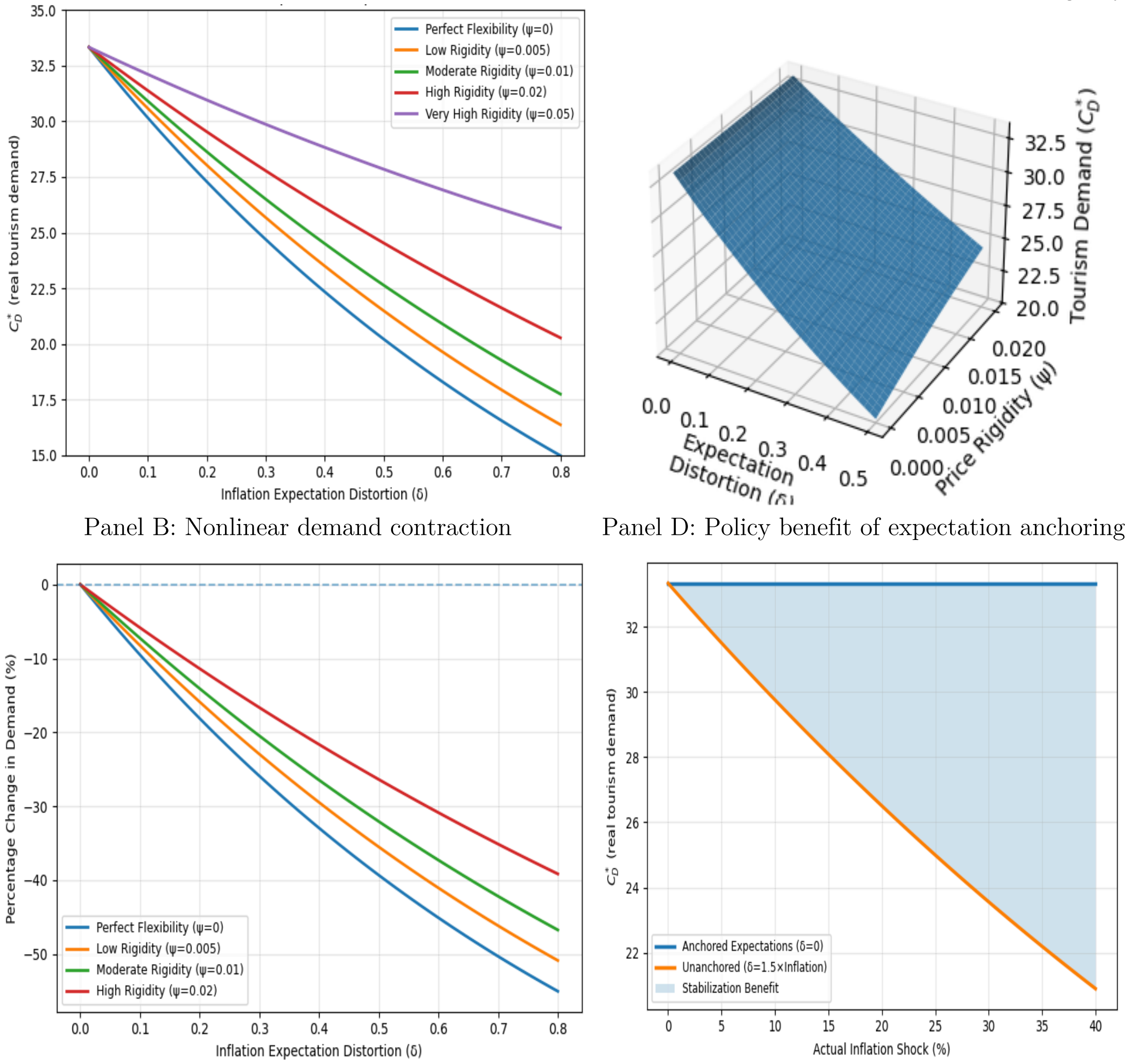
Figure 2: Tourism demand under inflation uncertainty: the stabilising role of price rigidity and expectation anchoring

Panel A: Demand response to expectation shocks

Panel C: Joint effects of expectations and rigidity

Panel B: Nonlinear demand contraction

Panel D: Policy benefit of expectation anchoring



Panel C of Figure 2 plots a three-dimensional view of how equilibrium real tourism demand varies jointly with the degree of inflation-expectation distortion and the price rigidity parameter. The downward sloping surface confirms the dual sensitivity of tourism demand to both behavioural and structural frictions. Along the δ axis, increases in inflation misperception steadily reduce C_D^*, consistent with the demand contraction effect observed in Panels (a) and (b). Along the ψ axis, however, higher price rigidity offsets part of this contraction, flattening the slope of the surface and illustrating the stabilising role of nominal stickiness.

The surface therefore encapsulates the key comparative static result of our extended model. Specifically, inflation expectation shocks depress real tourism demand, but the magnitude of this decline is inversely related to the degree of cost rigidity in the destination economy. When prices and wages adjust slowly, perceived cost shocks are smoothed over time, attenuating the fall in effective demand. Conversely, under perfect flexibility, expectation distortions are transmitted one-for-one into price perceptions, amplifying short-run volatility in tourism expenditure.

Panel D of Figure 2 compares equilibrium real tourism demand under two expectation regimes–anchored and unanchored–in response to rising actual inflation shocks. Under anchored expectation ($\delta = 0$), tourists correctly anticipate price stability, so demand remains steady even as inflation materialises. In contrast, when expectations are unanchored—tourists overreact by assuming inflation will exceed its actual rate ($\delta = 1.5 \times$ inflation)—perceived future costs rise more sharply, prompting a pronounced fall in C_D^*. The shaded region between the two curves quantifies the stabilisation benefit of maintaining well-anchored expectations. It represents the portion of tourism demand preserved when policy credibility prevents inflation overreaction.

Economically, it demonstrates that credible monetary frameworks and transparent communication can mitigate the behavioural amplification of inflation shocks in tourism markets. When expectation anchoring is strong, temporary inflationary pressures are absorbed without absorbed without triggering disproportionate cutbacks in international travel and tourism spending.

4. Conclusion and Policy Recommendations

This paper develops a novel theoretical framework to examine how inflation expectations — anchored versus unanchored — influence international tourism demand. By incorporating behavioral macroeconomic elements into a micro-founded model of tourism consumption, we show that subjective price expectations can significantly distort real tourism decisions, even in the absence of large changes in actual destination prices.

The central insight of the model is that expectation formation acts as an endogenous channel of volatility in tourism flows. When inflation expectations are unanchored, tourists overreact to perceived inflation risk, leading to nonlinear and exaggerated reductions in real tourism demand. In contrast, when expectations are anchored — typically through credible and transparent inflation targeting regimes — tourists respond less to transitory price shocks, resulting in more stable tourism flows. Furthermore, when tourism demand endogenously affects local prices, unanchored expectations trigger a vicious cycle. Additionally, as explored in subsection 2.4, considering flexible exchange rates in a behavioral framework may amplify rather than diminish our core results, as expectations of inflation and depreciation can become correlated and compound tourists' perceived risk. In particular, higher perceived inflation reduces demand, which further raises prices, exacerbating the decline. These findings underscore the importance of macroeconomic credibility in shaping forward-looking consumer behavior in global tourism markets. It also highlights that macroeconomic stability is not merely a backdrop but a core pillar of tourism competitiveness. By integrating behavioral expectations into policy design, destinations can transform inflation credibility into a strategic advantage — turning volatility into resilience.

Our results have clear policy relevance, particularly for tourism-dependent economies in the Global South and emerging markets. First, our analysis provides theoretical support for inflation targeting as not only a tool of macroeconomic stability, but also as a sectoral competitiveness strategy. By reducing inflation volatility and anchoring expectations, central banks can indirectly support inbound tourism by lowering perceived price uncertainty among international travelers. Second, our results have practical implications for crisis management and central bank communications. Specifically, managing expectations is as crucial as managing fundamentals. Tourism ministries and central banks alike should recognize that perceived inflation can erode a destination's attractiveness faster than realized inflation. Third, from a broader policy coordination perspective, our findings call for stronger alignment between tourism strategy and macroeconomic frameworks. While tourism promotion often focuses on marketing and infrastructure, our model implies that maintaining inflation credibility — through credible monetary policy frameworks, forward guidance, and institutional independence — can be an equally important lever for sustaining tourism resilience in uncertain macroeconomic environments. For instance, the Reserve Bank of Australia (RBA)'s transparent inflation reports reduced tourism volatility during the 2022 price surge. Governments can modify consumer price index (CPI) calculations to assign higher weights to tourism-related sectors (e.g., hospitality, airfare, accommodation). In fact, Thailand's central bank already tracks tourism-core inflation separately to guide rate decisions. To mitigate feedback loops and smooth price volatility by preventing scarcity-driven inflation, destination governments can subsidize off-season hotel operations to maintain idle capacity or allow temporary conversion of residential/office spaces to lodging during demand spikes. Furthermore, to reduce tourists' inflation fears by guaranteeing costs, while stabilizing cash flow for businesses, tax authorities can offer tax breaks to tour operators for contracts locking in prices over 6 months ahead. For example, Maldives' "Fixed-Price Holiday Guarantee" program, where participating resorts receive value-added tax (VAT) exemptions in exchange for price ceilings.

Although the present model abstracts from explicit intertemporal optimisation, its predictions can be interpreted within a multi-period context where travel planning, payment, and consumption occur at different times. In such settings, unanchored inflation expectations may initially stimulate advance bookings as tourists rush to lock in prices, but this front-loading merely shifts expenditure across periods. Once realised inflation confirms the anticipated rise in costs, overall real tourism activity declines. Conversely, in economies with credible inflation-targeting regimes, anchored expectations prevent both the short-term "booking bulge" and the subsequent contraction, leading to more stable aggregate demand. Thus, our framework should be viewed as representing the expectation-weighted component of forward-looking tourism consumption rather than the full temporal sequence of travel spending. Incorporating explicit intertemporal contracting and price-indexation features offers a promising direction for future theoretical work.

Our study lays the groundwork for a number of promising future research avenues. First, empirical validation of the model's key predictions could be pursued using bilateral tourism flow data combined with inflation expectation surveys (e.g., surveys at airports). Comparing behavior across countries with varying degree of inflation targeting credibility would offer rich heterogeneity for analysis. Future research can also extend the framework to account for income-tiered demand (e.g., luxury vs. budget tourists). Interdisciplinary applications involving behavioral economics, international marketing, and central bank communication studies could further bridge the gap between tourism and economics and policy-oriented macroeconomics. As inflation volatility continues to characterize the post-pandemic world economy, understanding how tourists from expectations — and how policymakers can shape them — will remain a fertile ground for both theoretical and applied inquiry.

Future empirical research could test the predictions of this model by comparing long-haul and short-haul tourism markets, where the elasticity of demand and the degree of expectation anchoring may differ substantially. Evidence from Vatsa and Balli (2024) and Yong (2014) suggests that realised inflation has only a limited statistical impact on long-haul tourism flows, particularly for high-income destinations such as New Zealand and European economies. Our framework provides a behavioural explanation for this finding. In particular, even when observed price elasticity is low, unanchored inflation expectations can still depress perceived affordability and booking intentions. Hence, a natural empirical extension would be to examine whether inflation expectation shocks exert stronger effects on short-haul or price-sensitive segments, thereby validating the model's theoretical mechanism across diverse tourism markets.

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