Family Formation under Uncertainty: The Role of Narratives of the Future during the COVID-19 Pandemic

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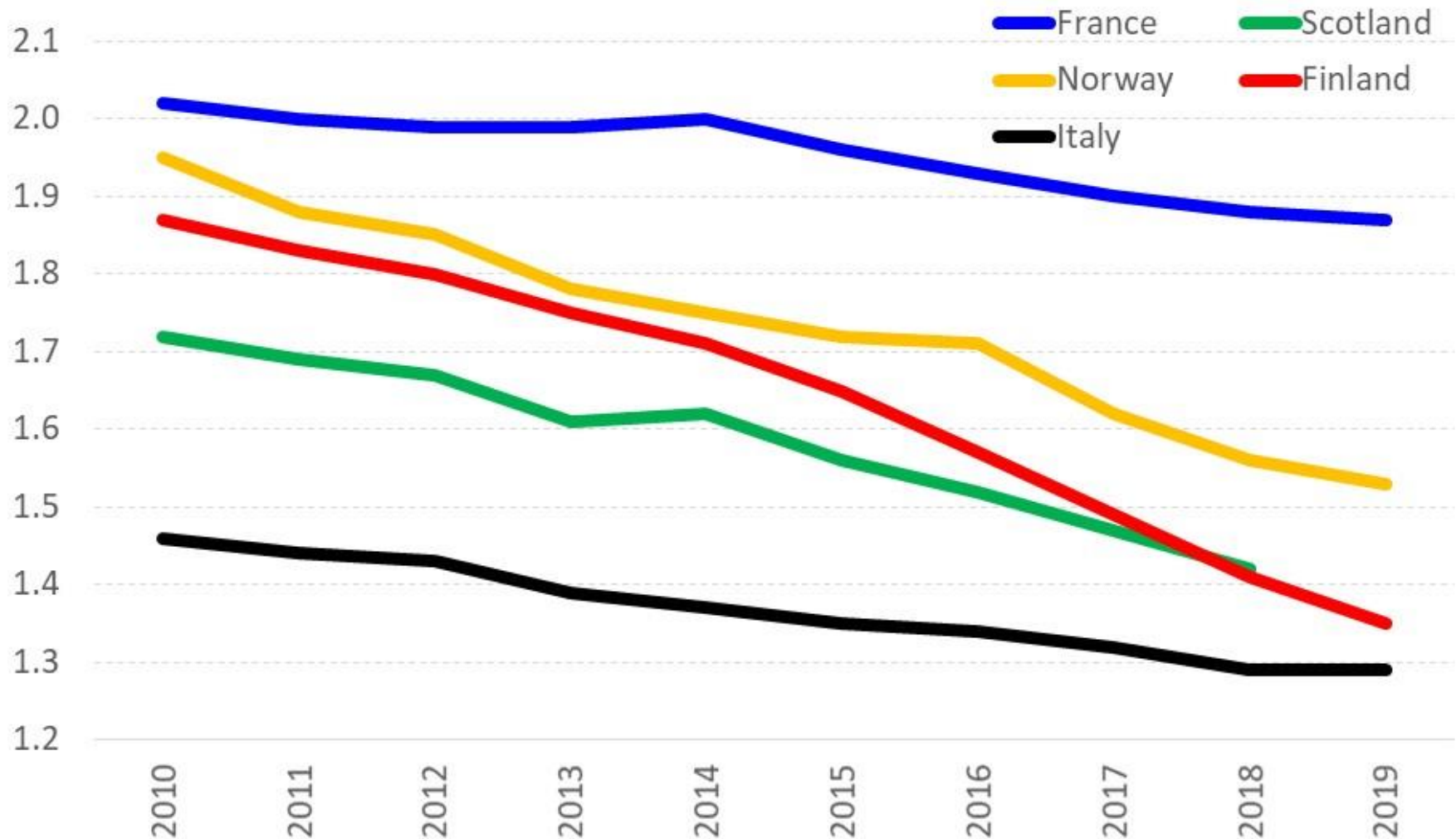# A New Fertility Winter in Europe

Total Fertility Rate 2010-2019

Legend: France, Scotland, Norway, Finland, Italy

Source: 2010-1017, Eurostat data; 2018-2019, Statistics Norway (Norway), Statistics Finland (Finland), Insee (France), Istat (Italy)

The Rise of Uncertainty

- Growing interest on the role of **economic uncertainty** for family dynamics

- **Globalization**, and the related processes of **labor markets deregulation** and **technological change**, make it **increasingly difficult for individuals to predict their future** and make long-term plans (Mills and Blossfeld 2013)

- The **Great Recession** has renewed the view that the outcomes of globalization are unpredictable and "out of control"

- This generates an extraordinary level of **uncertainty**, which represents the **game-changer** in contemporary societies, and deeply impacts **family life courses**

The "Traditional" Forces of Uncertainty

- At the micro-level, the empirical tradition operationalizes the forces of uncertainty through objective indicators of **individuals' actual and past labor market situation**

  - ➢ Papers addressing the relation between fertility and **unemployment** or **temporary jobs** are now booming (e.g. Barbieri et al. 2015; Kreyenfeld 2010, 2015; Vignoli et al. 2012, 2019, 2020; for a **meta-analysis**: Alderotti et al. 2019)

  - ➢ Importance of **persistence of employment uncertainty** in young adults' life courses (Özcan et al. 2010; Pailhé and Solaz 2012; Ciganda 2015; Busetta et al. 2019)

  - ➢ Not only employment: **Housing uncertainty** (Mulder 2006; Kulu & Milewski 2007; Vignoli et al. 2013; Tocchioni et al. 2019)

- Few studies focused on **subjective perceptions**, e.g. feelings of insecurity about current labor market status (Fahlén and Oláh 2018)

Open Questions

- What are the driving forces of fertility decline in **Nordic countries** after a Great Recession that, in "hard numbers", they really never experienced, or, at least, not to any relevant extent?

- **What are the drivers of the new fertility winter that contemporary European societies are currently facing?**
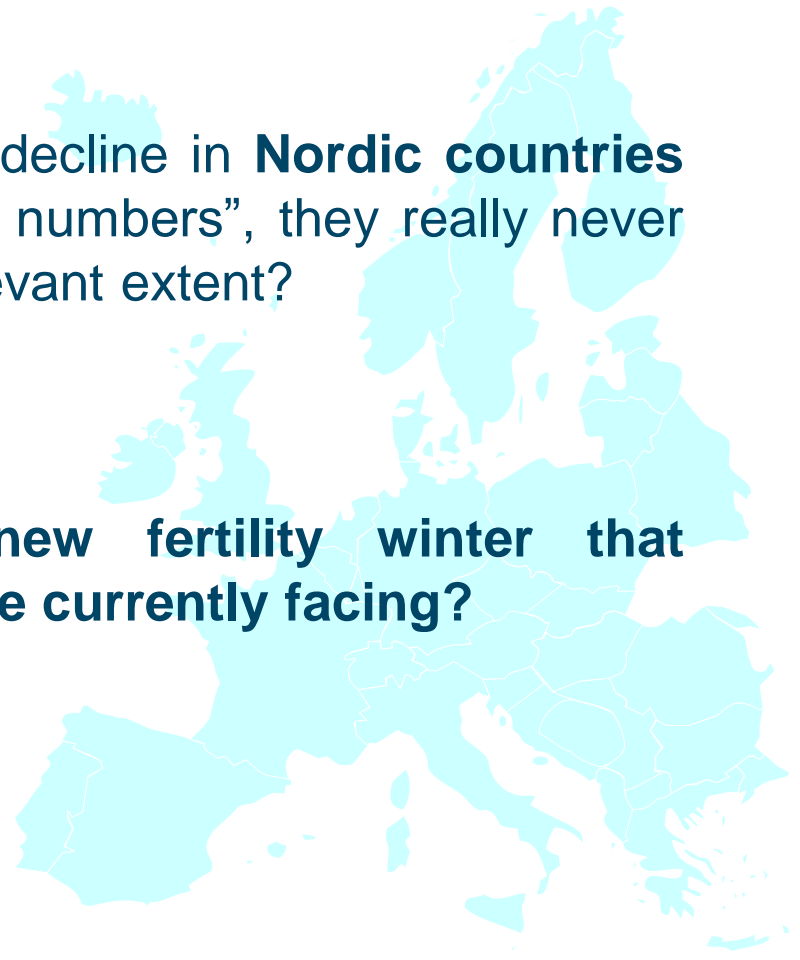
A Challenge for Demographic Theory

- The **European post-crisis shift toward very low fertility rates came as highly unexpected**, especially in Nordic countries,

- not only because they have been much less severely hit by the economic crisis,

- but also because they represent a benchmark in terms of **gender equality** and **female labor market participation** (Esping-Andersen and Billari 2015; Goldscheider et al. 2015), **youth emancipation** (Billari 2004), and **diffusion of new family forms** (Lesthaeghe 2010)

- …but also Italy's (and Spain's) return to a **lowest-low fertility regime** was totally unexpected (Billari 2008; Billari and Dalla Zuanna 2008)

A demographic "spring"?

TFR, 1995-2008
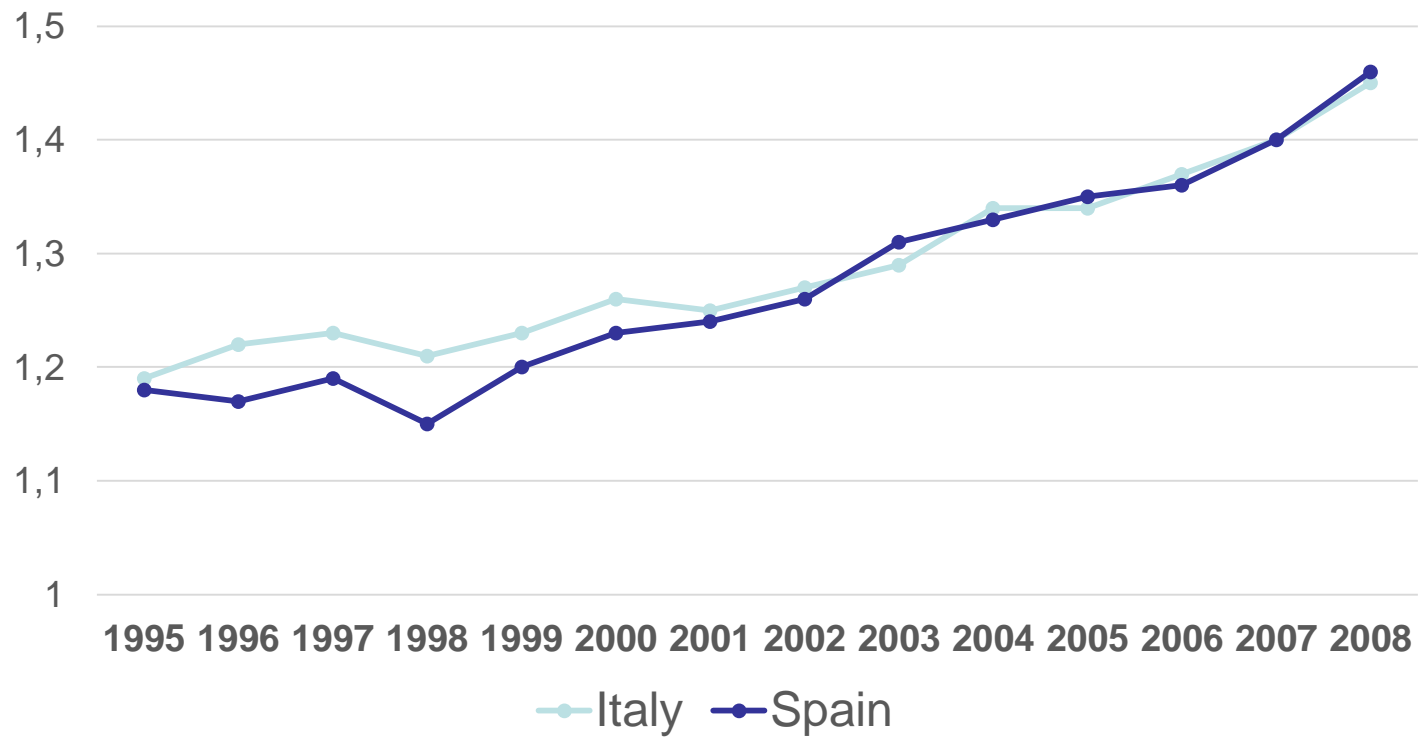
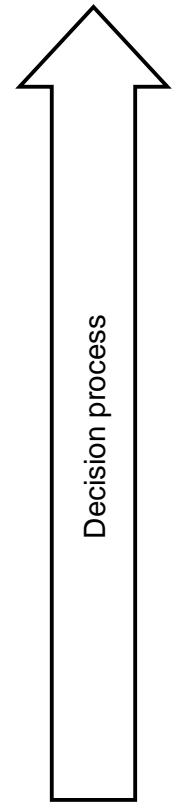# Do We Understand Economic Uncertainty?

- **Economic uncertainty**: lack of clarity about future economic prospects (Bloom 2014); i.e. **unknown probability distributions to possible outcomes** (Knight [1921] 2002; Beckert 1996)

- **Uncertainty is about the future**, not about the present or the past

- (Cumulative) employment disadvantage – and its perception – just identify the **"statistical shadow of the past"** and tell us little about **uncertain futures**

- To properly address the effects of uncertainty on family dynamics we need to recognize that economic uncertainty is a **forward-looking notion**

- The **Narrative Framework** (Vignoli, Bazzani et al. 2020; Vignoli, Guetto et al. 2020) provides the concepts to operationalize the influence of the future
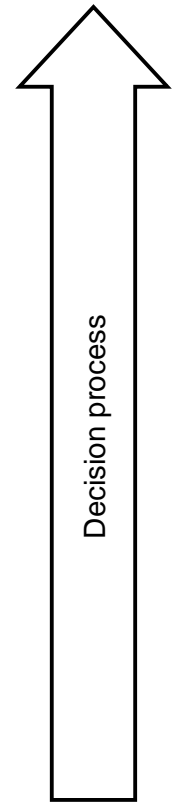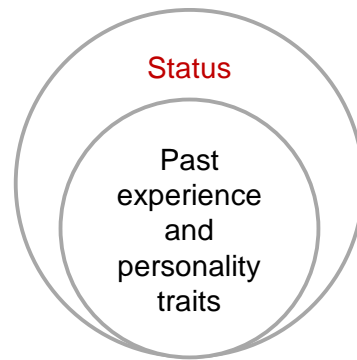
Narratives of the Future

- Uncertainty needs to be conceptualized and operationalized taking into account that people use **works of imagination**

- When people face an uncertain situation, they take into account past experiences and present status, but also **future expectations**

- Also, humans may shift from the expected course of action thanks to their imaginative capacity. A ***family imaginary*** is related to the type of family that people **wish to have in their future**

- Expectations and imaginaries are part of ***personal narratives of the future*** that influence reproductive decisions, irrespective of structural constraints and their subjective perception.

The Narrative Framework

Past experience and personality traits

Decision process

The Narrative Framework

Status

Past experience and personality traits

Decision process

The Narrative Framework

Perceptions

Status

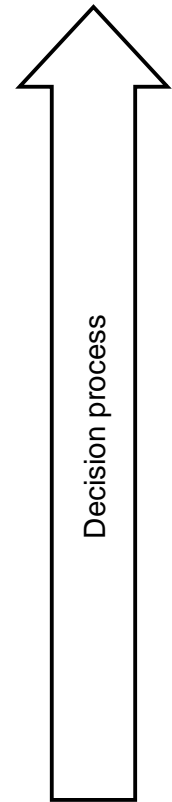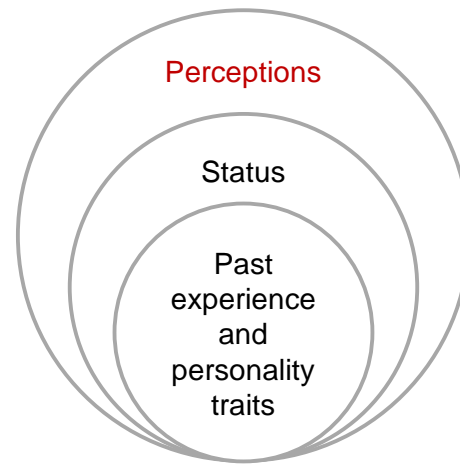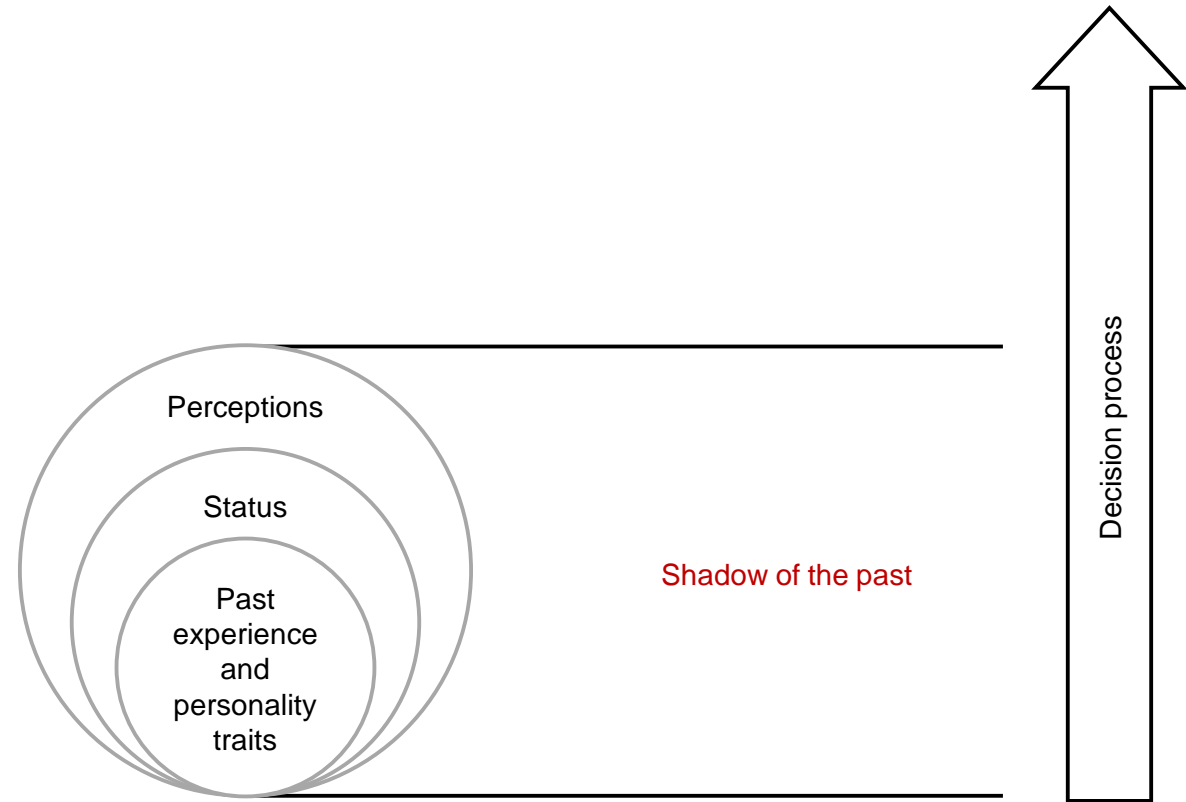Past experience and personality traits

Decision process

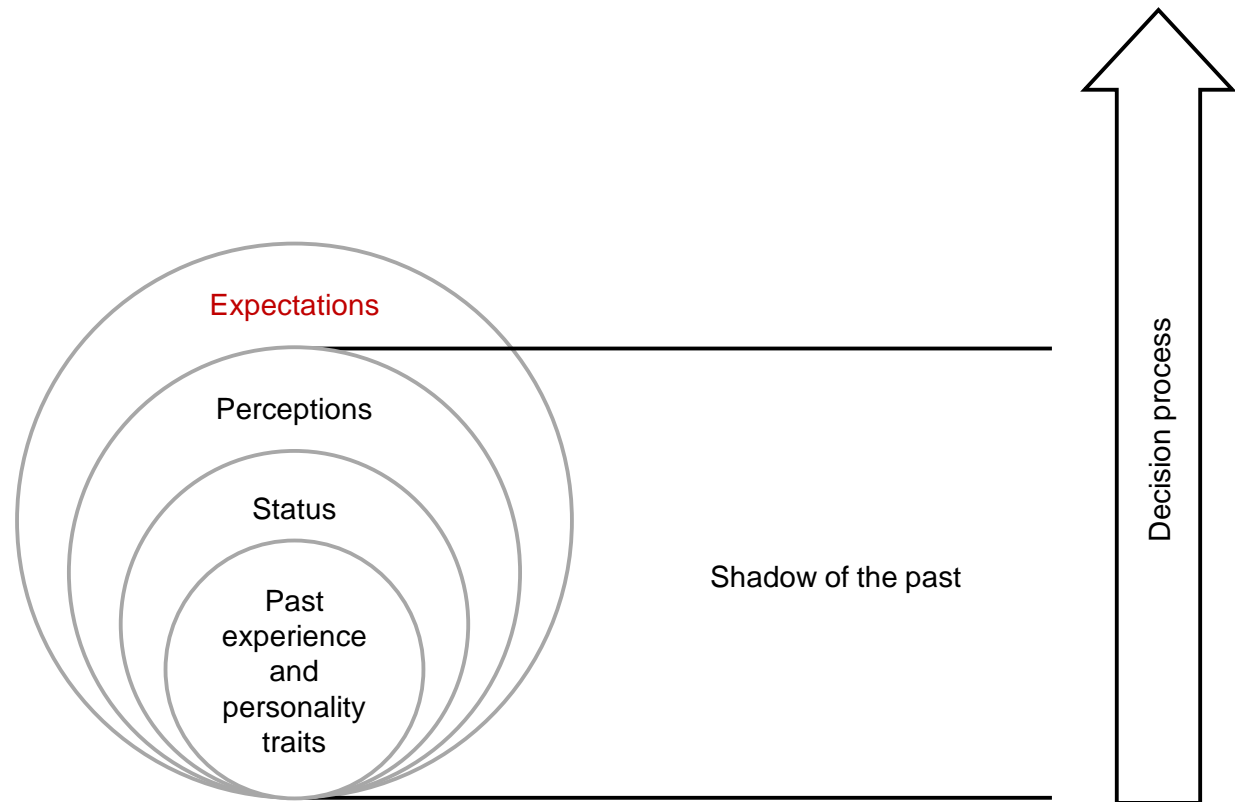# The Narrative Framework

The Narrative Framework

The Narrative Framework
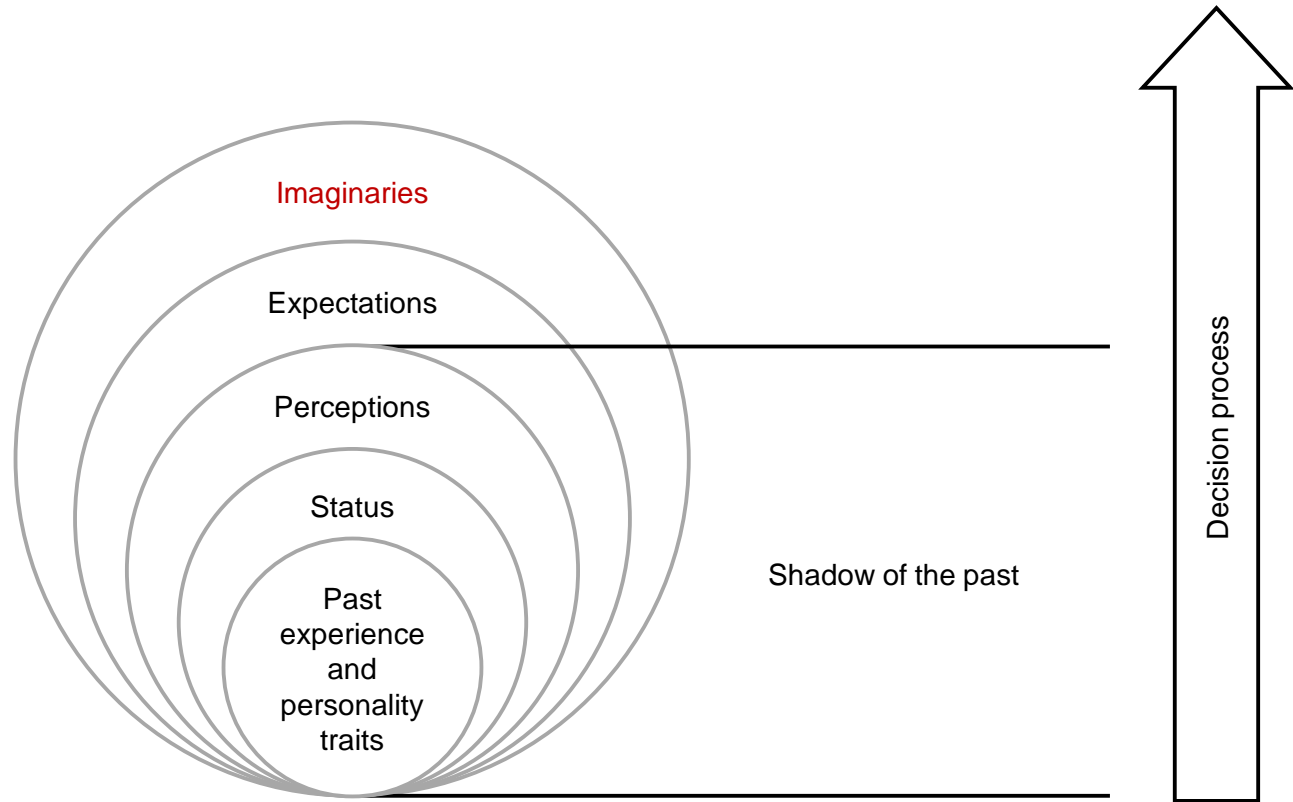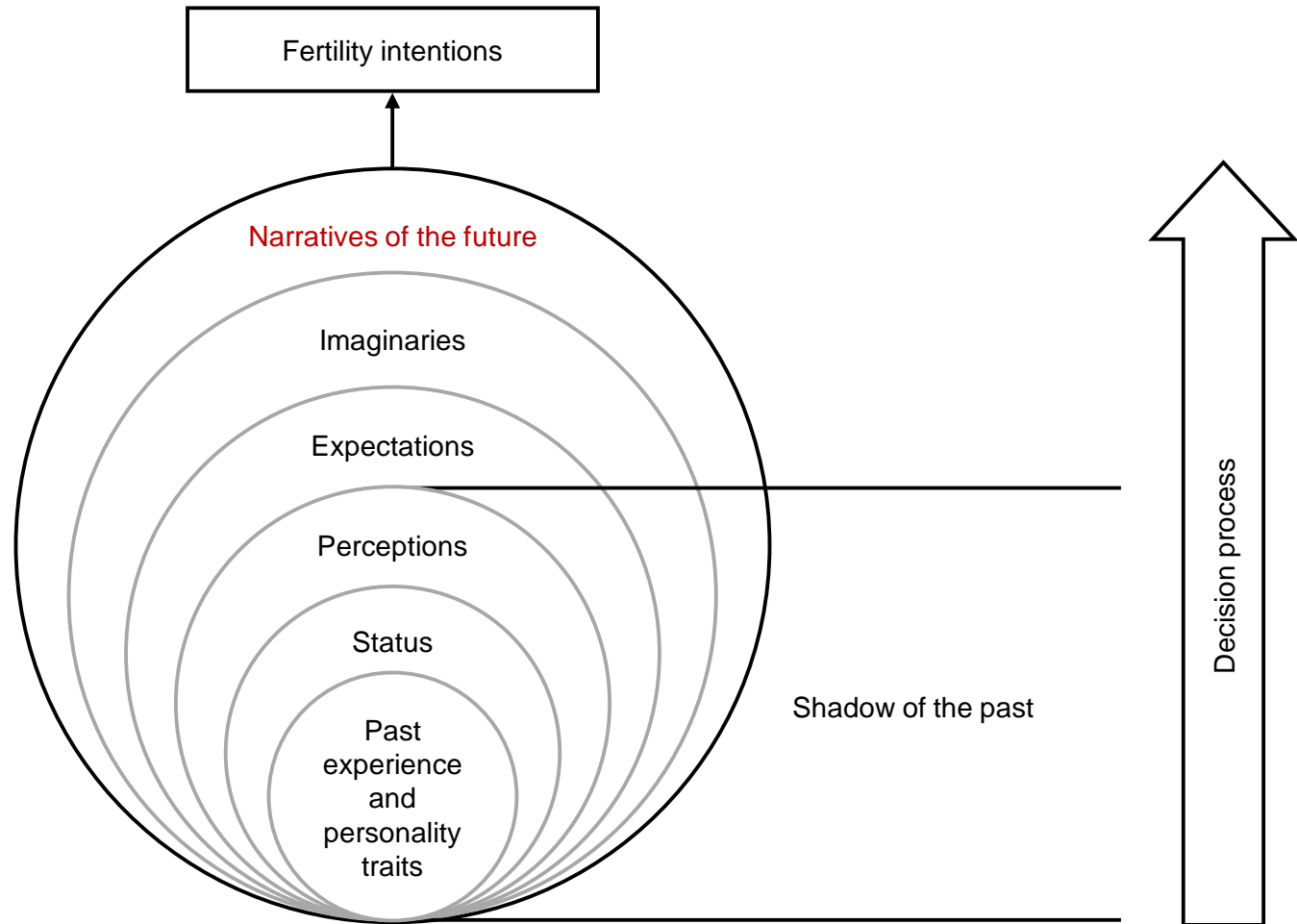
The Narrative Framework
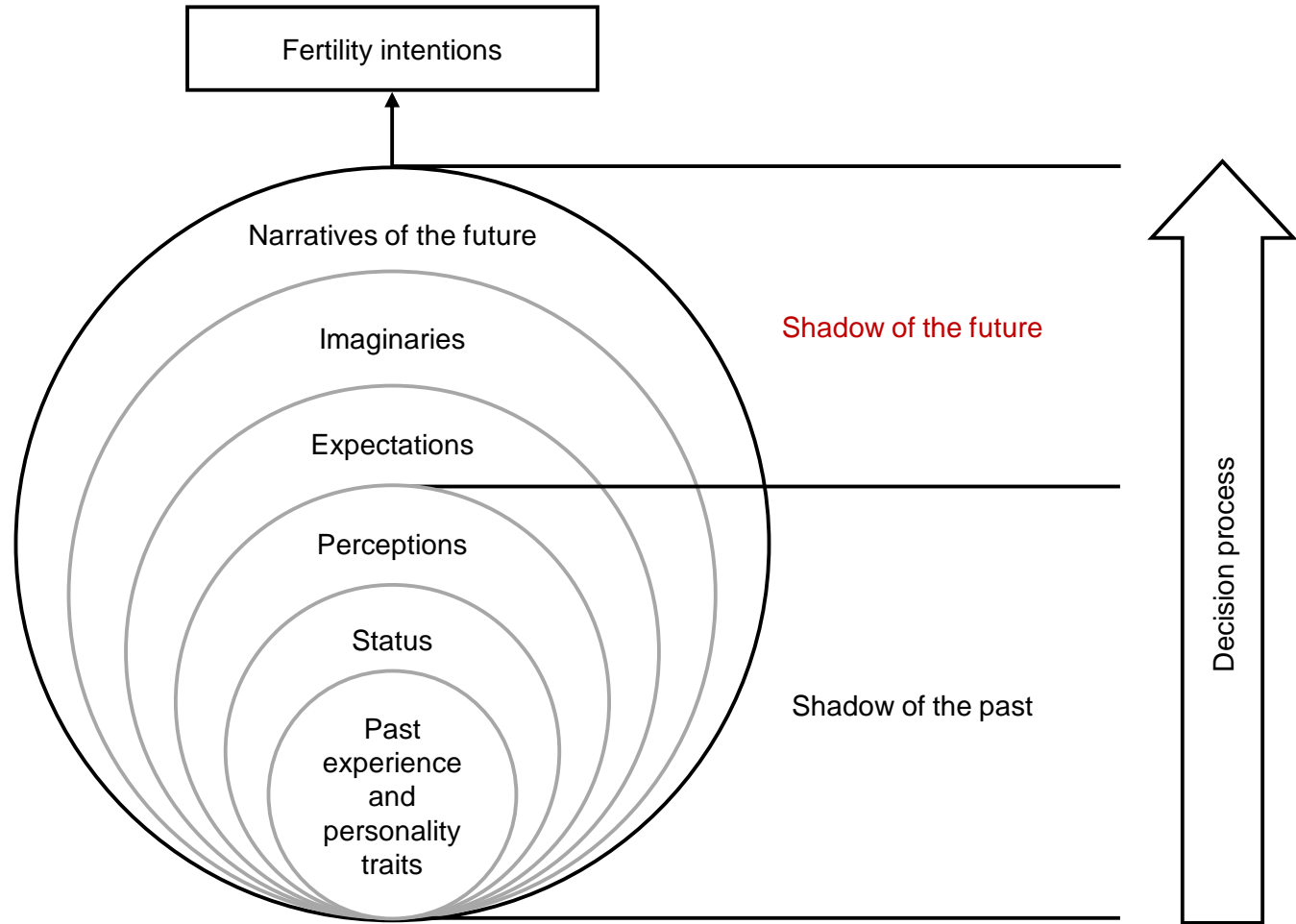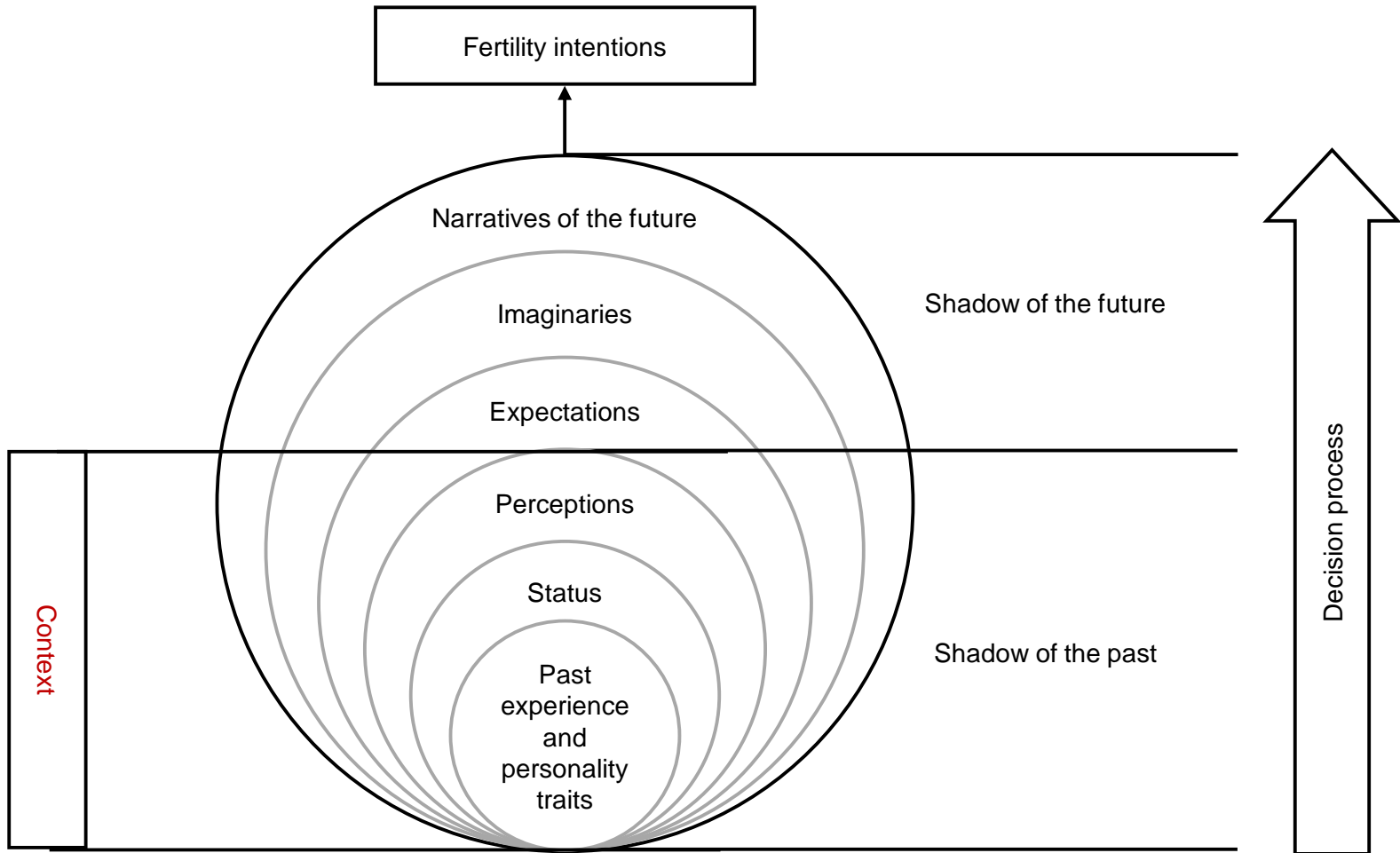
The Narrative Framework

The Narrative Framework

Fertility intentions

Narratives of the future

Imaginaries

Expectations

Perceptions

Status

Past experience and personality traits

Shadow of the future

Shadow of the past

Context

Decision process

Press and Media Shared Narratives

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ÉCONOMIE

2019, année à risque pour l'économie mondiale

La crainte d'une guerre commerciale et de la fin de la croissance américaine pèsera sur la conjoncture.

Par Marie de Vergès · Publié le 24 décembre 2018 à 06h39 - Mis à jour le 24 décembre 2018 à 12h18

Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. Believe me, it will be enough.

Mario Draghi

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The Narrative Framework
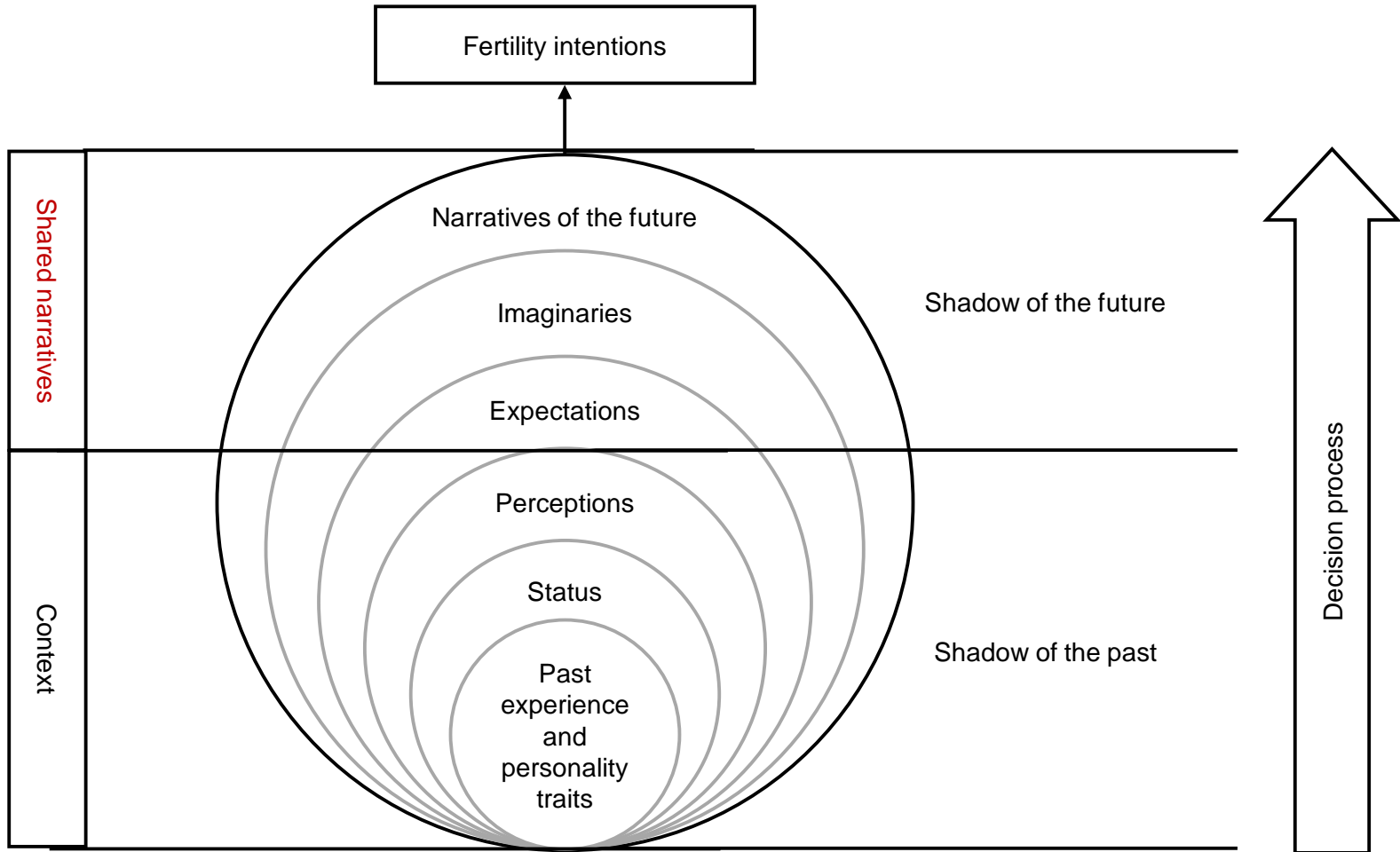
Fertility in the Era of Uncertainty

- The focus on past and actual structural constraints, and their subjective perception, is **not enough** to explain the new fertility winter in Europe

- Net of factors that operationalize the "statistical shadow of the past", **young adults might postpone fertility because their narratives of the future are uncertain**

- Such narratives are influenced, among other factors, by **media-channeled narratives**

Narratives and Demographic Behaviors

- **Observational studies**: Surveys collecting both **forward-looking measures** of economic uncertainty and fertility are very few

- **Cross-country laboratory and online experiments** to assess the role of different narratives of the future on union and fertility intentions

- Combination of **Natural Language Processing** methods to build an **indicator of the level of economic uncertainty** channeled by press and (social) media. Are the narratives similar between countries? Have they changed over time?

- **Qualitative research**

Narratives and Demographic Behaviors

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- **Qualitative research**

Results of joint paper with Daniele Vignoli & Giacomo Bazzani (University of Florence)

COVID-induced Uncertainty

- The **COVID-19 disaster** has created an enormous uncertainty shock

- **90% of newspaper articles about economic issues** in March 2020 mentioned "COVID," "Coronavirus," "pandemic" or related terms (Baker et al. 2020a)

- By considering three **uncertainty indicators**, Baker and colleagues argue that more than half of the **actual economic contraction** in the US is due to **COVID-induced uncertainty** (Baker et al. 2020b)

Italy & COVID-19

- The **first severe case of COVID-19 pandemic** in the Western world

- The **longest complete lockdown** experience (2 months in total)

- At the end of April 2020, Italy had about 25,000 deaths due to COVID-19

- Very **strong role of media**: daily, at 6 p.m., Italians gathered in front of the TV for the official updates on the pandemic

- The TV **announcements of the President Conte** had more than 70% of share

The COVID-19 Pandemic and Fertility

- The COVID-19 pandemic represents a unique occasion to test the **Narratives Framework**

- Because of COVID-induced uncertainty, **subjective states** and **personal narratives of the future** – also influenced by media shared narratives – **may gain the upper hand over the "shadow of the past"**

  ➢ The **expected duration of the COVID-19 emergency** and its socioeconomic consequences may influence family plans

  ➢ Even during the difficulties of the COVID-19 emergency, individuals with a **positive family imaginary** may decide to have children

Sampling and Data Collection

- **On-line survey** at the premises of the international survey company **Lucid** (high academic reputation for its quality and rigor)

- Combination of **longitudinal survey** (follow-up in the next months) & **experimental approach**

- Total sample: ~**4,000 individuals**

- Data collected **during the lockdown**: April 25 – May 1 2020

- We used **quota sampling** on men and women **aged 20-40**

  ➢ Based on data from the Italian national statistical office, we have set **quotas** for **gender, age, and region** (Centre and South) **or province** (North) of residence

Variables – *Shadow of the past*

Past experience and personality traits

➢ Sociodemographic background (area of residence, age, parity, number of siblings), risk aversion, education

Status (objective exposure to the pandemic and its responses)

➢ **Labor market situation** in January (employment, type of contract, social class)

➢ Net monthly **household income** (at interview)

➢ **Transitions to not employment,** or to **smart work** following the pandemic

➢ Direct and indirect **contact with SARS-CoV-2**

Variables – *Shadow of the future*

Media exposure

➢ Daily hours of **Internet** and **TV** use (January and interview)

Perceptions

➢ Sense of **insecurity** (0-10) regarding: own **health**, **labor market situation,** the **diffusion of the pandemics**, and the **general political** and **economic situations**

Expectations

➢ How long do you think will it take before **your personal situation** comes back to its pre-pandemic condition? (No change, 3 months, 6 months, 12 months, 2 years, 2> years)

Imaginaries

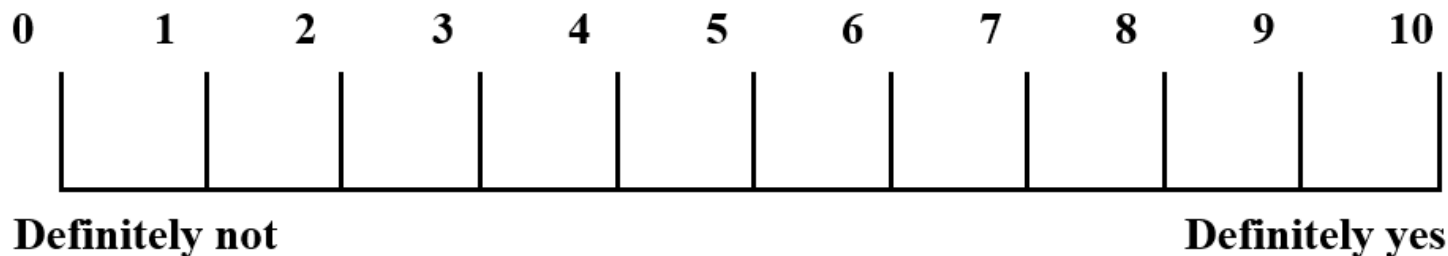➢ How much having a(nother) child would make you happy (0/10)

In January, before the Coronavirus pandemic, were you planning to have a child in the following 3 years?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Definitely not   Definitely yes
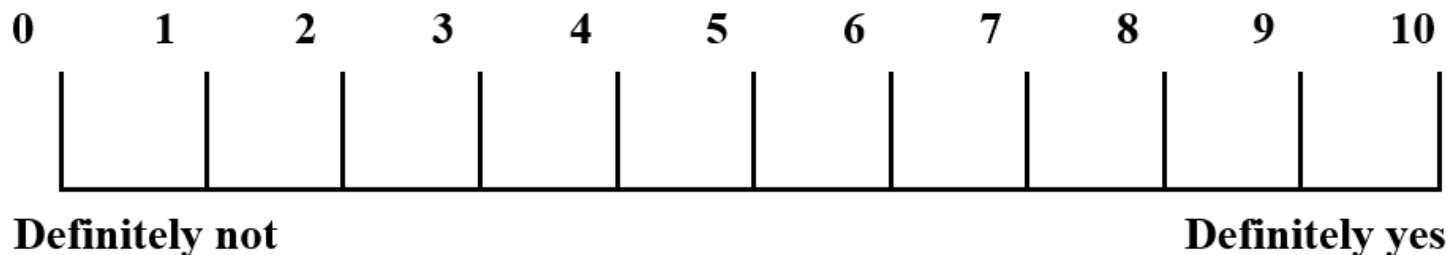
- I or my partner were expecting

Today, do you plan to have a child in the next 3 years?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Definitely not   Definitely yes

- I or my partner are expecting

➢ Stepwise **OLS** regressions:

$$M1: \Delta Fertility_{t1-t} = \boldsymbol{Status} + Past + Fertility_t$$

$$M2: \Delta Fertility_{t1-t} = \boldsymbol{Media} + \boldsymbol{Perceptions} + M1$$

$$M3: \Delta Fertility_{t1-t} = \boldsymbol{Imaginaries} + \boldsymbol{Expectations} + M2$$

- **t1** = Interview, **t** = January

➢ Model 3 is also estimated through **Multinomial logistic regressions** to analyze the probability of **fertility intentions decreasing, increasing or remaining the same** as before the pandemic

Determinants of change in fertility intentions after the pandemic
OBJECTIVE STATUS

	M1	M2	M3
Permanent-hi class (Jan)	0.0162	0.0245	0.010
Temporary-lo class (Jan)	-0.257**	-0.170	-0.191
Temporary-hi class (Jan)	-0.150	-0.068	-0.087
Black job (Jan)	-0.525*	-0.399	-0.359
Self-lo (Jan)	-0.187	-0.108	-0.042
Self-hi (Jan)	-0.373**	-0.304*	-0.290*
Not employed (Jan)	-0.223*	-0.0155	0.005
Student (Jan)	-0.550***	-0.479***	-0.393***
HH income (€)	0.000	0.000	0.000
Lost job during pandemic	-0.002	0.168	0.171
Temporary not working	-0.054	0.078	0.055
Transition to smart work	0.069	0.050	0.090
Indirect SARS-CoV-2	0.050	0.093	0.071
Direct SARS-CoV-2	0.215	0.222	0.228
Obs.	*3934*	*3934*	*3934*
R-squared	*0.162*	*0.184*	*0.247*

Determinants of change in fertility intentions after the pandemic
MEDIA, PERCEPTIONS, EXPECTATIONS, IMAGINARY

	M2	M3
Web (Int-Jan)	-0.013	-0.021
TV (Int-Jan)	-0.063	-0.083**
Insecurity about own health	-0.047***	-0.034**
Insecurity about own work	-0.046***	-0.036***
Insecurity about economy	-0.059***	-0.044**
Insecurity about politics	-0.011	-0.011
Insecurity about pandemic	-0.001	-0.009
Normal in 3m		-0.010
Normal in 6m		-0.044
Normal in 12m		-0.130
Normal in 2y		-0.178
Normal in >2y		-0.686***
Happiness from having a(nother) child		0.179***
Obs.	*3934*	*3934*
R-squared	*0.184*	*0.247*

Note: Models control for fertility intentions in January, sex, age, parity, area of residence, risk aversion, status and objective exposure to SARS-CoV-2

Fertility Intentions by Expectations on the Pandemic

Multinomial logistic regression: Predicted probabilities of changing intentions
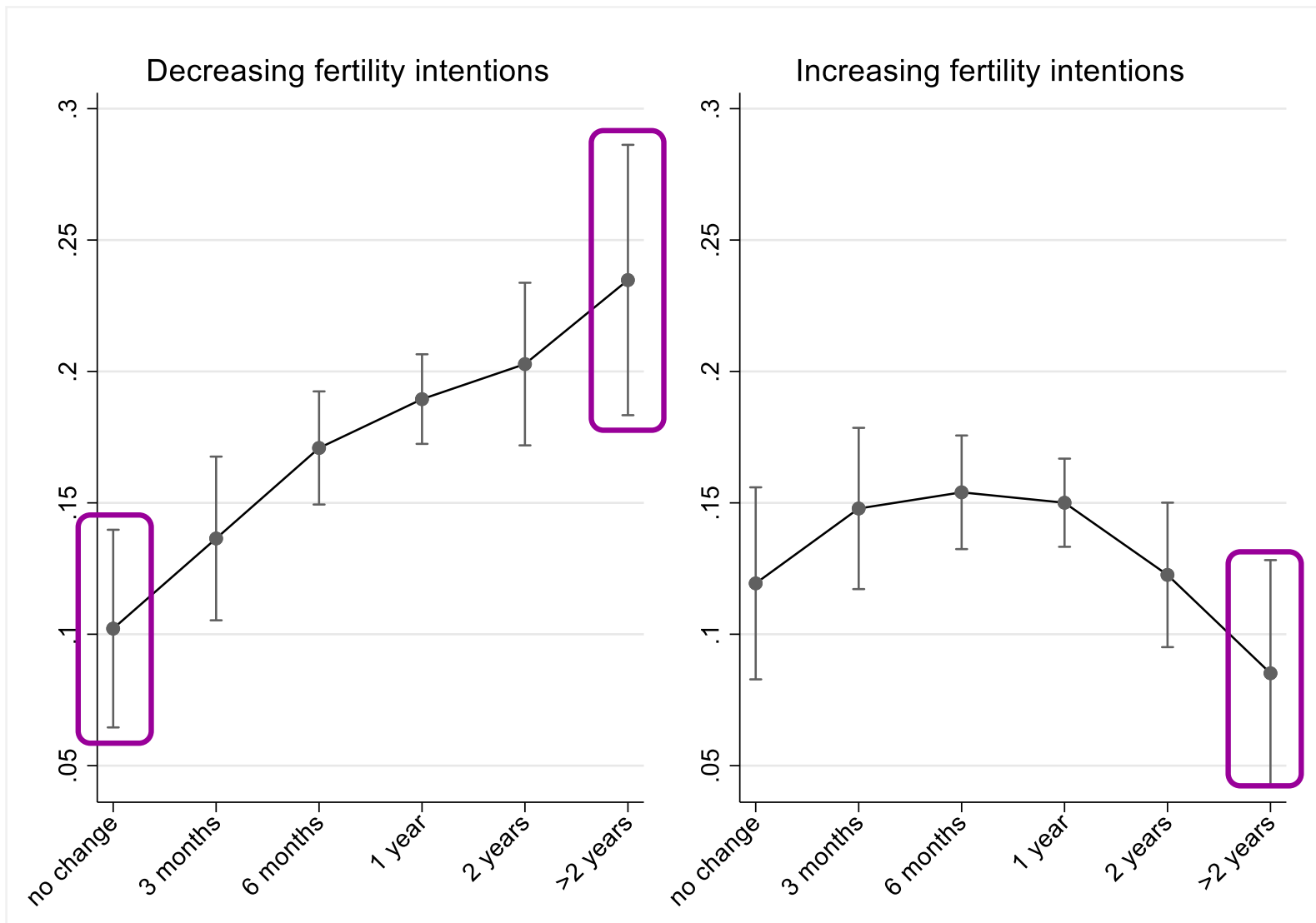
Experiment: A New Narrative of the Future

- Respondents were exposed to a mock news bulletin concerning the **expected end of the pandemic emergency**

  - A few days before data collection the Italian Prime Minister announced a **task force of academics and other prominent experts** to address the COVID-19 emergency

  - Respondents were eventually **debriefed** about the fictitious nature of the information they received

- Respondents were **randomly assigned** one of five treatments, each presenting a **different expected duration** before the return to normality

- We then asked them about their **fertility intentions** in the next three years **in light of the expected duration of the emergency**

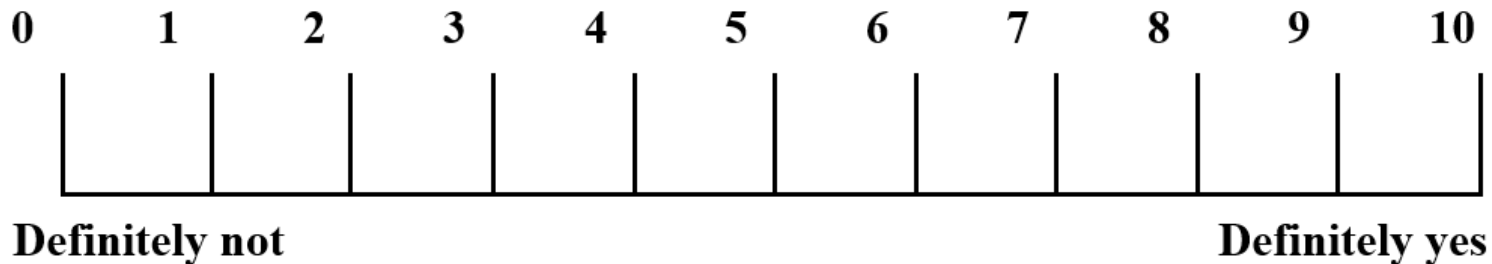- And analyzed changes with respect to **previously stated intentions**

The Treatment

In the next screen we will provide you with up-to-date forecasts concerning the evolution of the Coronavirus pandemic.

Within the last few days there haven't been substantial variations in the number of contagions, hospitalizations, and deaths. The task force composed by leading experts of the Coronavirus pandemic eventually obtained sure predictions about the future of the pandemic in Italy.
The experts predict that the Coronavirus pandemic emergency will last X before a return to normality

5 randomized scenarios for X: 3 months, 6 months, 12 months, 2 years, more than 2 years

Considering that the Coronavirus pandemic emergency will last X, do you plan to have a child in the next 3 years?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Definitely not   Definitely yes

➤ **OLS** regression:

$$M1: \Delta Fertility_{t2-t1} = \boldsymbol{Treatment} + Recall + Fertility_{t1}$$

$$M2: \Delta Fertility_{t2-t1} = \boldsymbol{Treatment} + Recall + Xb + Fertility_{t1}$$

- **t2** = Post-treatment, **t1** = Pre-treatment (at interview)

- **Treatment**: dummies for randomized scenarios

- **Recall**: dummy for those respondents who were not able to recall exactly which type of scenario they were exposed to

- **Xb** = all control variables included in previous M3

➤ Model 2 is also estimated through **Multinomial logistic regressions** to analyze the probability of **fertility intentions decreasing, increasing or remaining the same** before and after the treatment

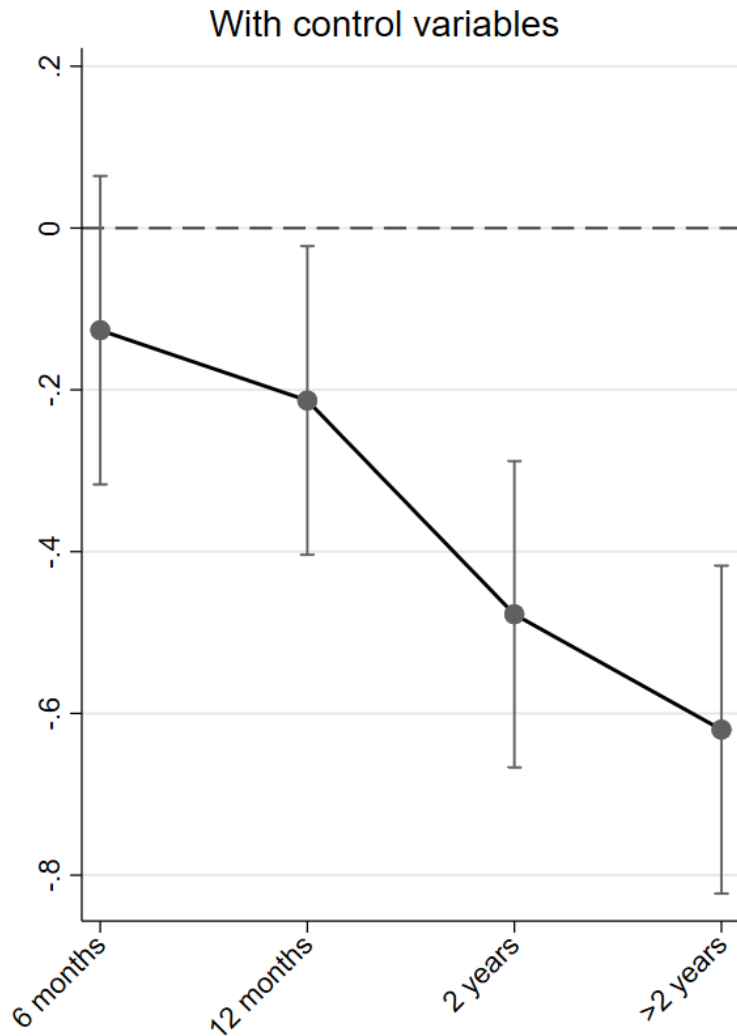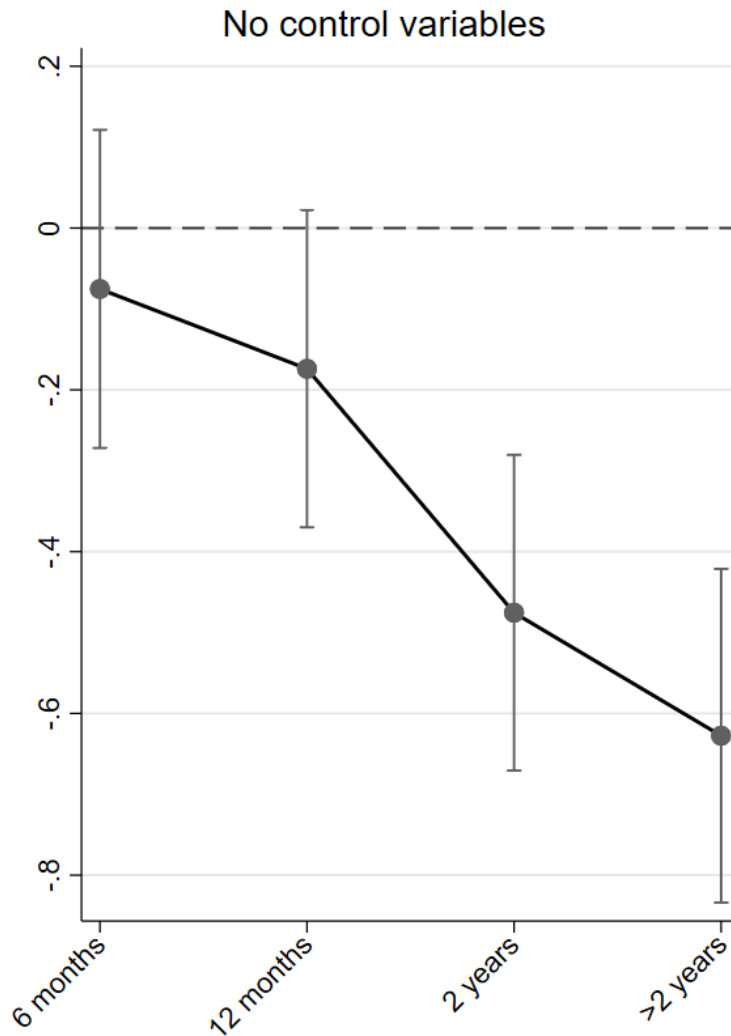# Experiment: The *Causal Impact* of a New Narrative

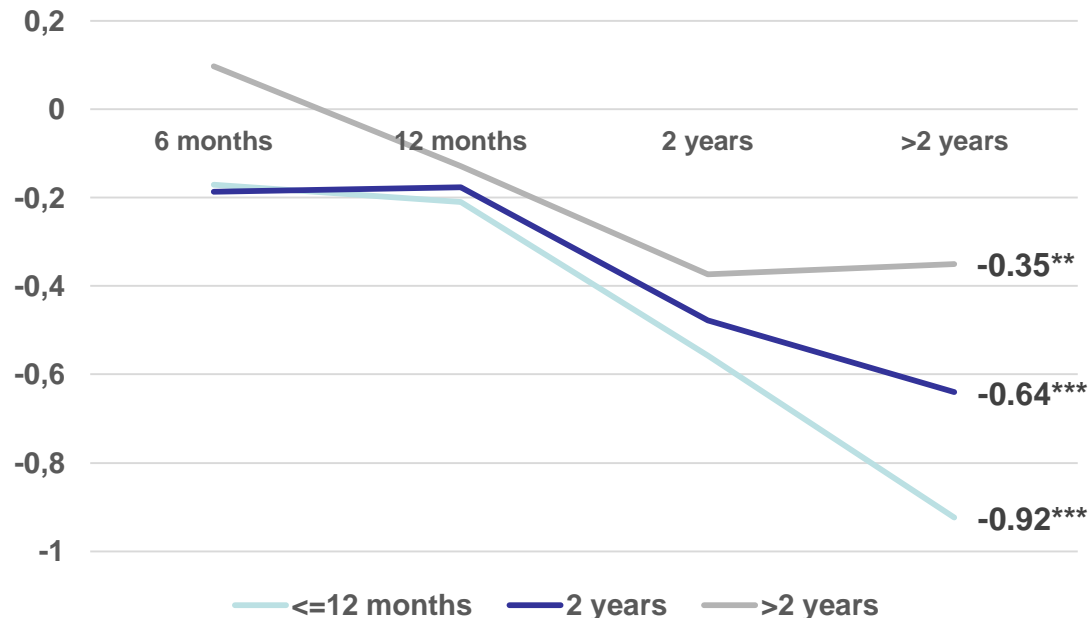**Change in fertility intentions after the treatment, by different scenarios**

No control variables
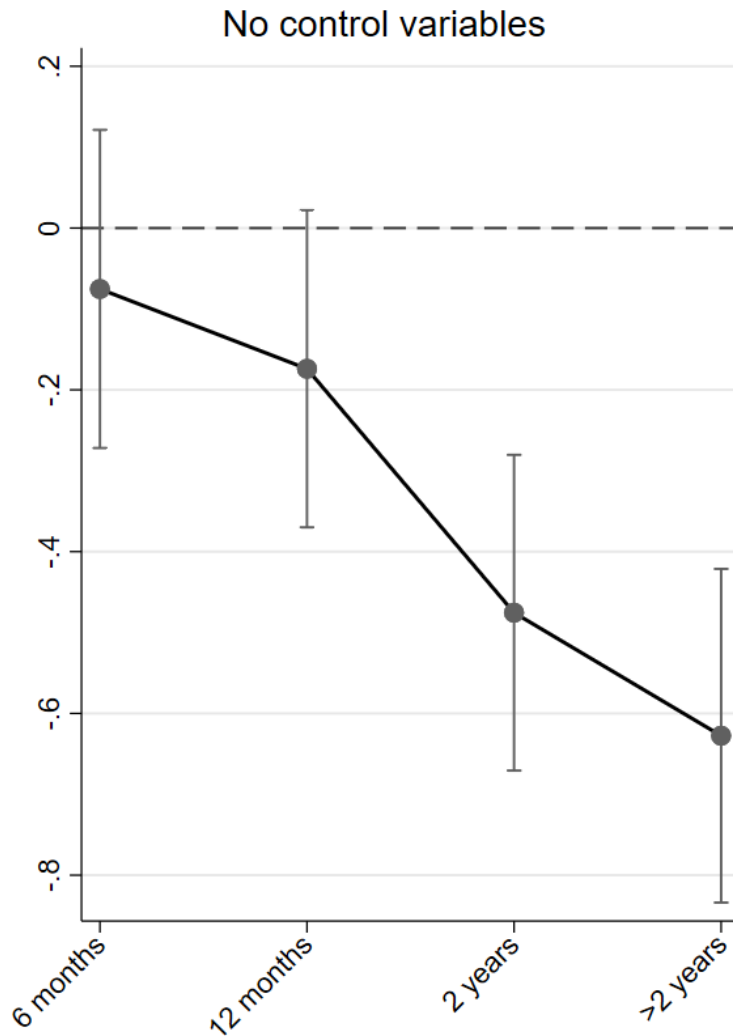
Experiment: The *Causal Impact* of a New Narrative

Change in fertility intentions after the treatment, by different scenarios

Additional models

- No differences by **sex** and **area of residence**, although slightly stronger effects among **Southern women**

- Stronger treatment effects among respondents with **more optimistic expectations** exposed to the **more pessimistic scenario**

The Interplay Between Expectations and Imaginaries

Change in fertility intentions after the treatment, by expectations and imaginaries

Predicted probabilities after multinomial logistic regression
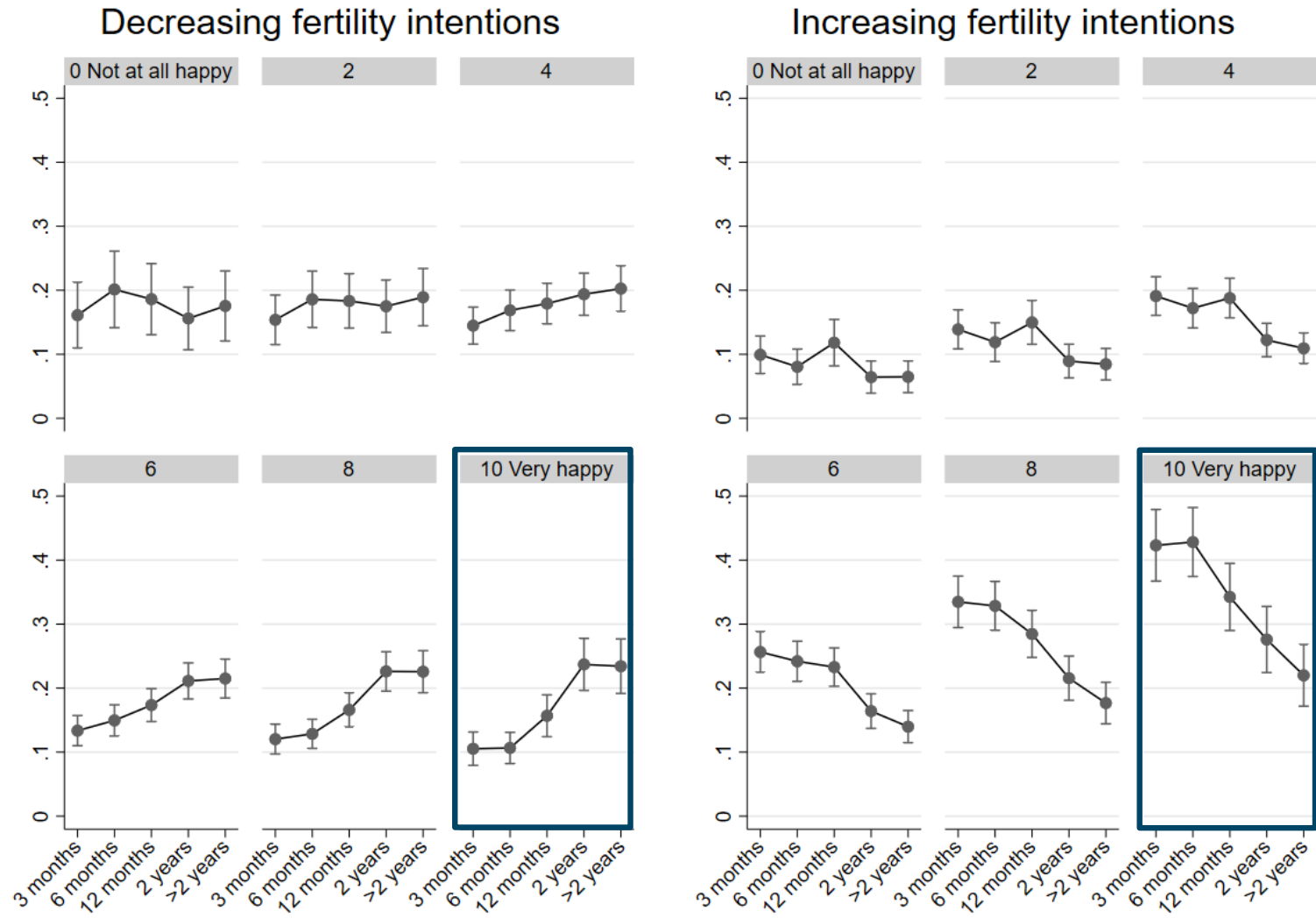
Conclusions

- **Shadow of the past**: Objective indicators of individuals' exposure to health and economic consequences played a very limited role in re-shaping individuals' fertility plans during the pandemic

- **Shadow of the future**: Perceptions of insecurity, and especially expectations and imaginaries, came out as crucial moderators of individuals' adaptation to a new context characterized by overwhelming uncertainty

- We provide evidence of a **causal impact of narratives of the future** on fertility intentions

→ Future research should clarify whether the **spreading of narratives of an uncertain future** are responsible also for the **Western fertility winter**

References on the Narrative Framework

- **Vignoli, D., Bazzani, G., Guetto, R., Minello, A., & Pirani, E.** (2020). Uncertainty and narratives of the future: A theoretical framework for contemporary fertility. In Schoen R. (eds), Analyzing Contemporary Fertility (pp. 25-47). Cham: Springer

- **Vignoli, D., Guetto, R., Bazzani, G., Pirani, E., & Minello, A.** (2020). A reflection on economic uncertainty and fertility in Europe: The narrative framework. Genus 76(28): 1-27

- **Guetto, R., Bazzani, G., & Vignoli, D.** (2020). Marriage and cohabitation under uncertainty: the role of narratives of the future during the COVID-19 pandemic. European Societies: 1-15, DOI: 10.1080/14616696.2020.1833359

- **Guetto, R., Bazzani, G., & Vignoli, D.** (2020). Narratives of the future shape fertility in uncertain times. Evidence from the COVID-19 pandemic. DISIA Working Paper (11)

Thank you for your attention!

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