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Covid-19 risk perception and political actors: how confidence in the government or opposition affected risk perception during the Italian lockdown

Abstract

This paper investigates the connections between the socio-demographic patterns of Covid-19 risk perception and the influence of confidence in the government or opposition during the first Italian lockdown. Confidence in political actors is assumed as a proxy for the adoption of the interpretative frames they provide. Socio-demographic characteristics are crucial in understanding the perception of risks ascribed to a specific event. However, the politicization of such events and subsequent production of interpretative frames by political actors gives rise to further crucial factors when the event is characterized by 'uncertainty'. This empirical analysis is based on primary data from a survey conducted in Italy during the last three weeks of closures (26 April – 17 May 2020, N = 1,704) and clearly shows that the most worried respondents were women, elderly people, those living in the north of Italy, those declaring an upper-secondary level of education, or those with a job in the socio-cultural professionals class. Accounting for confidence in the government or opposition shows that respondents who state a higher confidence in the opposition were less worried than those with higher confidence in the government. As the politicization of the pandemic was primarily based on the favoring/disfavoring of the strict measures to limit infections at the expense of the health of the economy and personal freedom, the position of respondents on these two trade-offs (economy/lockdown and freedom/lockdown) is accounted for. The analysis shows that position on these two dimensions completely reflects the association between confidence in political actors and risk perception – apart from the elderly, those

resident in the north of Italy, and socio-cultural professionals. These results provide insight into the literature assessing socio-demographic patterns of Covid-19 risk perception and the politicization of the pandemic.

Keywords: Covid-19, risk perception, political attitudes, socio-demographic characteristics

Introduction

Since Strong's (1990) landmark work, epidemics and pandemics have been considered extra-ordinary social phenomena that individuals have difficulty dealing with using existing interpretative schema giving rise to exceptional emotional states as a consequence. The 'uncertainty' characterizing the extra-ordinariness of such events determines a general increase in the perception of risk, generally based on the potential likelihood of a serious threat to personal health, wealth and social relations. However, risk perception is not shared equally across individuals and social groups. To better understand the elements and processes influencing risk perception and its unequal distribution, social scientists pay specific attention to the *frames* that circulate among the population (Staniland, Smith, 2013). According to Entman (1993), the concept of *frame* refers to an interpretative schema about an object or event that gives meaning to a social situation and shapes actions and cognitions

in everyday life. A frame selects specific elements of the reality and makes them 'salient': providing a definition, moral judgments and solutions as a result.

In contexts characterized by 'uncertainty', actors provide interpretations of the ongoing phenomenon. Literature has identified recurring frame topics across countries and over time: such as fear, uncertainty and panic (Strong, 1990; Dingwall *et al.*, 2013; Monaghan, 2020). During the Covid-19 pandemic, the public relied on specific actors, seen as competent to define the ongoing phenomenon (political actors, the mass media, health professionals, scientists – the so-called 'authorities'), for information on the virus and its spread (Shao, Hao, 2020). Political actors in particular compete for approval of their frames from the public that actually consumes them. These frames are founded on existing inequalities and conflicts, are tied to previous political agendas and policy proposals, and affect any measures taken. During the Covid-19 pandemic, political actors provided their own interpretation of it and the measures required to limit its spread, and these different outlooks were then presented to the public for approval/disapproval. As a consequence, the Covid-19 pandemic (the *phenomenon*) was politicized by these actors in order to gain consent and mobilize voters (Bobba, Hubé, 2021). The stance of a voter in the existing political competition between government and parties in opposition constitutes a political bias (Barrios, Hochberg, 2020) that affects their approval of an assessment of a phenomenon and the suggested protective measures.

However, the perception of risk is not only affected by the consumption of frames. It is primarily based on personal experience of the phenomenon concerned (Slovic *et al.*, 2004), and on the cultural significances the individual ascribes to it and how these are

negotiated in the social context of embeddedness (Lupton, 2021). Risk perception is therefore affected by socio-demographic characteristics and social positions, such as gender, age or socio-economic status, that denote a person's experiences and their belonging to social groups and contexts (Lupton, 1999; Bish, Michie, 2010; Dohle *et al.*, 2020). A consistent outcome in risk perception analyses is that "members of social groups that are less powerful tend to be more concerned about risks than members of powerful social groups" (Lupton, 1999: 24). Examples of this outcome are the gender and age gaps: women and the elderly are more concerned than men and younger people respectively for their health and safety (Slovic, 1999; Shao, Hao, 2020), and studies into the Covid-19 pandemic have detected higher levels of concern in areas with higher infection rates (Nelson *et al.*, 2020; Motta Zanin *et al.*, 2020)[1]. In addition, socio-demographic characteristics and social positions play a role in shaping an individual's political attitudes, such as their predisposition to trust a given political actor over the others and, hence, to adopt a particular frame over others (Shao, Hao, 2020). The social groups of belonging and the socio-cultural, economic and political contexts of embeddedness affect an individual's perceptions and responses to other individuals, objects and events, according to specific socialization processes (Lupton, 1999).

This paper investigates the association between personal risk perception about Covid-19 and the adoption of the interpretative frames provided by political actors, assumed as expressed by political attitudes. The association is analyzed by accounting for the effects of

[1] The associations between socio-demographic characteristics and risk perception are introduced in the first section.

socio-demographic characteristics and social position on risk perception, whose patterns are widely discussed in the literature. The primary data was collected from an Italian sample (N = 1,704) during the lockdown (9th of March 2020 – 17th of May 2020). This paper aims to answer the following:

- During the Covid-19 lockdown in Italy, with what intensity were individual socio-demographic characteristics associated with risk perception, and how did risk perception align with political attitudes?
- How are associations between socio-demographic characteristics and risk perception affected when accounting for the trust respondents have in the interpretative frames provided by political actors?

~~The hypotheses advanced to answer these questions are that:~~

- ~~*the higher a respondent's level of approval of the government and its policies, the higher their level of perceived risk (H1);*~~
- ~~*this is mediated by attitudes towards the trade-offs economy/lockdown and personal freedom/lockdown (H2);*~~
- ~~*the attitude variables (preference for the economy over lockdown and personal freedom over lockdown) do not nullify the associations between socio-demographic factors and risk perception (H3).*~~

Section 1 introduces the literature focused on the frames produced by Italian political actors during the lockdown. The connections between these frames and concern about the virus are highlighted, accounting for Italian voters responses to such frames according to their political attitudes. These political attitudes pertain to confidence in the government or

opposition, who competed for the primary institutional interpretation of the pandemic[2], and to preferences for personal freedom and economic activity over measures to limit infections (*i.e.* lockdown).

Section 2 presents the dataset and the methods employed, with the results presented in *Section 3*. The analyses observe the average differences of risk perception according to confidence in political actors.

The findings of this paper provide insights into the connections between risk perception and political support during the 2020 Covid-19 lockdown in Italy. These connections are of interest in the light of the September 2022 general elections that brought victory to the opposition parties, which had been particularly critical of measures restricting personal freedom and economic activity.

1. Competing frames of the Covid-19 pandemic and socio-demographic characteristics during the 2020 Italian lockdown

Understanding how confidence in political institutions affected public concern about the Covid-19 pandemic requires a thorough analysis of the competing frames provided at the time by the political actors. Such an analysis dates back to Strong (1990) who, in the

[2] The government and opposition were the main political entities with decision-making and legislative powers during lockdown.

interactionist tradition, proposed a typology of epidemics aimed at studying the framing process of a disease, its competitive nature and subsequent societal mobilization. Observing recurring topics among the frames concerned – centered on elements such as uncertainty about the danger of a disease, its means of transmission and the alleged aftermath of the proposed interventions – he identified three intertwined types of psycho-social epidemics: 'of fear'; 'of explanation and moralization'; and 'of action or proposed action'. The set of cultural significances a given frame ascribes to the disease structures along value orientations, and these affect the perceptions and responses of individuals to objects and events. These value orientations shed light on pre-existing relationships among social groups; inequalities and marginalization in particular (Dingwall *et al.*, 2013; Lupton, 2021; Marchesi, De Luigi, 2022). The institutional definition of a critical event is important due to its policy implications. From the perspective of the sociology of health and illnesses, specific assessments generate specific responses, which also impact social compliance and control, by minimizing some aspects and accentuating others (Conrad, Barker, 2010).

A common framing process that characterizes crises is 'politicization'. This is carried out by political actors in an attempt to gain consent and mobilize voters (Bobba, Hubé, 2021). The literature agrees on two features of this process with regard to epidemics or pandemics. Firstly, the competing frames of the political actors refer to and are adapted by their existing political agenda and positions on key issues. Secondly, 'panic' (and synonyms thereof) is considered the main topic most of the frames of epidemics and pandemics are grounded on, and affects perceptions of the crisis' object primarily in terms of risk (see Staniland, Smith, 2013).

Processes of moralization and dramatization have already been highlighted by many authors as regards the Covid-19 pandemic (Monaghan, 2020; Battistelli, Galantino, 2020). These processes interact in affecting beliefs, perceptions, and behaviors during a crisis, since the preference for a specific frame over others constitutes a political bias (see Barrios, Hochberg, 2020).

During the Covid-19 pandemic, 'alarming' ('biosecurity') and 'reassuring' frames competed[3]. Those governments that imposed lockdowns followed Strong's (1990) 'epidemic of fear' frame[4]. Indeed, it is worth pointing out that during the lockdown in Italy, official communication showed an asymmetry between government and people: it focused on persuasion to comply with the measures adopted by stressing the health risks associated with the virus and infections (Battistelli, Galantino, 2020; Mazzoni *et al.*, 2021). This social construction of the reality gave rise to a selectivity of Covid-19 risks: health risks were prioritized over those pertaining to the economy and personal freedom. As a result, the government both widened its 'social control' over the actions of citizens and decentralized responsibility to them (Mazzoni *et al.*, 2021). The demanding measures taken to control the virus were not however uncontested. Full implementation of the controls required a high level of public trust/confidence in the government, but a high level of distrust of political institutions, parties and democracy characterizes Italy (Bordandini *et al.*, 2020; Guglielmi *et*

[3] Such frames define the risks associated with a disease and actual victims in different ways. Furthermore, victims can be ascribed to both the disease and the measures enacted (Staniland, Smith, 2013).
[4] These governments opted for a 'moralizing' discursive strategy, feeding concerns about the virus with the aim of achieving compliance in order to minimize the number of infected people (Monaghan, 2020). As seen in previous epidemics, such a frame competed with another focused on the minimization of the health aftermath of the disease to avoid social and economic strains.

al., 2020). As for the opposition parties, despite widespread support early on, they began to openly contest the 'alarming' frame and stressed the negative aftermath of the measures on the economy and personal freedom (*e.g.* Battistelli, Galantino, 2020). Therefore, the polarized political narratives already characterizing the Italian political competition since the 2018 general election[5] were transferred into the competing frames of the seriousness of the virus and the efficacy/aftermath of the measures[6].

Prior to and during the lockdown, the Italian government was led by the Five Star Movement (M5S), which tried to legitimate the forceful measures taken by softening its populist stance, with the aim of delivering "governmental solidarity", in order to reduce the polarization around the crisis (Bobba, Hubé, 2021: 134). Indeed, Barbieri and Bonini (2021) show that those who voted for the M5S at the 2018 general election were more likely to support the government's measures, whereas voters who preferred one of the two main right-wing populist parties – the League and Brothers of Italy (FdI) – were more likely to oppose them. Therefore, the pre-existing political divide[7] affected the debate on the pandemic and its management. Similarly, many authors observe that the populist parties in opposition in most European countries (not just Italy) supported severe emergency measures in the initial

[5] Mass media communication played a central role in the framing strategy of both the government and the opposition. For a deeper discussion of its role, see Mazzoni *et al.* (2021), and Battistelli and Galantino (2020). Barrios and Hochberg (2020), focusing on the United States, provide insights about the connections between the partisanship/political ideological orientations of individuals and their disposition to ascribe higher levels of credibility to specific actors and news sources, *i.e.* the ones matching their political orientations.

[6] Battistelli and Galantino (2020) provide a thorough description of this opposition in the Italian context.

[7] In August 2019, the coalition government of the M5S and the League was dissolved: the League withdrew their confidence in the government and a new round of consultations led to a new coalition government of the M5S and the Democratic Party (PD). The majority of the representatives of latter and the other mainstream moderate party, Go Italy (FI), aligned in support of the new coalition government.

phase of the pandemic in order to prevent potential throwbacks in terms of reputation, only to contest them once the spread of the virus started to abate. The main argument in opposition to lockdown was the need to reopen the economy in order to avoid a harsh downturn, and as such the health risks were minimized while still accepting the pandemic constituted a serious health emergency[8] (Bobba, Hubé, 2021; Bertero, Seddone, 2021). The situation in Italy is summarized as follows by Bertero and Seddone (2021: 50-52):

> "As a major government party, the Movement was called to take prompt decisions to respond to the crisis; in opposition, the League continued to criticise the government, although its flagship proposals appeared undermined in a political field entirely absorbed by the health crisis. […] The uncertain situation offered an opportunity to blame the government for whatever. Particularly, it was accused of endangering the Italian people by being incompetent in the management of the health emergency: in January, the League protested that Italy had not closed its borders before the outbreak of the pandemic, whilst in Easter (6 April) the stated measures had to be relaxed to allow, for example, people to go to church. Similarly, all the government efforts made for responding to the economic crisis were considered systematically insufficient."

The opposition parties were leveraging unavoidable discontent with the rigid measures; in particular "around the economic consequences of the emergency and the lack of adequate economic support for citizens" (*ibidem*: 55).

As an 'uncertain' phenomenon that underwent a politicization process, affected by pre-existing political polarization, the public consumption of the resulting frames during the

[8] For example, no mainstream political party criticized the medical and scientific community. The objects of contention were the management of the crisis and the policies taken to contain it (Bobba, Hubé, 2021; Bertero, Seddone, 2021).

Covid-19 pandemic is of interest to social scientists. Shao and Hao (2020) observe how public opinion reacts to these frames in terms of risk perception and the association between this perception and confidence in political actors. Barrios and Hochberg (2020) observe that personal political bias resulting from confidence in a specific actor affects the assessment of the phenomenon concerned. Such a perceptual filter screens the information individuals receive from the external context according to its consistency with their own political orientations (Shao, Hao, 2020). Based on these observations, it is hypothesized that *the higher a respondent's level of approval of the government and its policies, the higher their level of perceived risk* (*H1*). In doing so it is assumed that those respondents who stated confidence in the government during the lockdown approved of the measures taken at the time to limit infections.

The role of predisposition for the frame supplied by a political actor is intertwined with the effect of socio-demographic factors and social positions (Shao, Hao, 2020; Marchesi, De Luigi, 2022). Confidence in the authority of those perceived as entitled to define a phenomenon affects the degree of information provided that is commuted into personal perception, and this confidence is affected by personal political predispositions. These predispositions act as a perceptual filter for information, channeling personal adherence to a specific frame and the corresponding level of perceived risk (Shao, Hao, 2020). Consequently it is hypothesized that the pattern of perceived risk *is mitigated by attitudes towards the trade-offs economy/lockdown and personal freedom/lockdown* (*H2*)[9].

[9] During the Covid-19 emergency, people's evaluations of their governments proved to be associated with their compliance with regulations (social distancing, mask-wearing, hygienic measures). Lobera *et al.* (2023)

'Subjective' risk perception is also shaped by an individual belonging to social groups and contexts, which affect their socialization processes and determine the cultural significances according to which they interpret and perceive a specific phenomenon (Lupton, 1999, 2021). Gender and age are the socio-demographic factors found most relevant as regards Covid-19 risk perception (Marchesi, De Luigi, 2022). Social gender roles mean higher degrees of concern about health and safety among women, whereas the higher mortality rate made the elderly more concerned than younger people (Shao, Hao, 2020). Another socio-demographic factor is the area of residence: varying degrees of concern have been observed according to the infection rate in the place people live, for example the north west of Italy (Nelson *et al.*, 2020; Motta Zanin *et al.*, 2020). Although social status is associated with varying levels of risk perception, a common pattern for this association is not found in the Covid-19 pandemic: more affluent and educated people are provided with material and immaterial resources, which influence them to be either more or less concerned about the aftermath of the pandemic than the lower social strata of the population (Shao, Hao, 2020).

In light of the role played by social factors in affecting risk perception, it is hypothesized that *the attitude variables (preference for the economy over lockdown and personal freedom over lockdown) do not nullify the associations between socio-demographic factors and risk perception* (*H3*). Therefore, it is assumed that any differences in the level of risk perception across social groups remain when controlling for the political disposition of respondents.

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detect a non-negligible role of people's pre-existing political values in affecting these evaluations, according to their ideological affinity with the government.

2. Dataset and method

This paper investigates the different levels of risk perception associated with the Covid-19 virus and pandemic across social groups in Italy according to the political frame 'consumed'. The analyses are based on data collected by "The Politics and the Challenge of the COVID-19 Pandemic"[10]: a survey aimed at Italian voters (*i.e.* Italian adults having the right to vote) conducted under CAWI research methodology during the last three weeks of lockdown (26 April – 17 May 2020) with 1,825 respondents and 1,704 valid cases. The questionnaire also included questions aimed at collecting a respondent's party preference during the last Italian general election (held in 2018) and their propensity to vote for the main parties. Therefore, Italian voters constituted the reference population, and those respondents not entitled to vote were excluded from the analyses[11]. The self-selected and, consequently, non-representative nature of the sample required the data being weighted to reflect population benchmarks on the gender and area of residence socio-demographic dimensions, the weights being computed with respect to official statistics provided by the Italian Ministry of the Interior[12].

[10] "La Politica e la Sfida della Pandemia COVID-19".

[11] The link was disseminated via social media, obtaining a self-selected sample. In order to exclude from the analyses those respondents not entitled to vote, the two questions focused on voting behaviour were provided with the option "Not entitled to vote". The final dataset is available from the authors on request.

[12] The six-monthly inquiry of the Italian electoral body up to 31 December 2019 was used for the reference statistics. Source: https://dait.interno.gov.it/elezioni/rilevazione-semestrale. These reference statistics do not include further socio-demographic variables, such as age and education. Therefore, the weights that have been

2.1. Risk perception, confidence rate and attitudes towards lockdown

The dependent variable is risk perception: according to Slovic (1987, 1999), the worry about personal health and the social and economic aftermath on self, relevant others, the nation and the wider world. It is assumed to exhibit a multidimensional nature, being the result of psychological, social, cultural and institutional processes shaping interpretations of both the specific event and the hazards associated with it (Kasperson *et al.*, 2003). This multidimensional nature is ultimately synthetized by individuals as a concern evaluation of the phenomenon, which ranges from highly to not at all risky (Marchesi, De Luigi, 2022). TABLE 1 shows the frequency distribution of the question included in the survey focusing on the respondent's perceived concern about the virus: only 25.4% of respondents stated that they were not at all or not really concerned about the virus, while the majority of them (74.6%) were somewhat or very much worried. Notwithstanding the multidimensional nature of risk perception, it is adopted here as a proxy and parsimonious continuous dependent variable. Its range of values is rescaled between zero and one, with a mean computed on the total sample of 0.64 (SD = 0.27).

TABLE 1. Frequency distribution of risk perception variable. Weighted data.

Generally speaking, how much are you concerned about the virus?	Count	Percentage
Not at all	91	5.3%
Not really	342	20.1%
Somewhat	884	51.9%
Very much	387	22.7%

employed do not permit to address sample distortions associated with over- and under-representation of specific social groups.

Total	1,704	100.0%

The survey also assessed confidence in political actors during the lockdown through a specific set of questions. Respondents were asked to express their confidence in a plurality of (political and non-political) actors, including the government and the opposition, on a 0-10 scale. These are used here to compute the following rate measure:

$$Relative\ confidence\ rate_i = \frac{Confidence\ in\ the\ opposition_i}{Confidence\ in\ the\ government_i}$$

Relative confidence rate relates how much individual respondents trusted the opposition over the government. As the two right hand variables assume values between zero and ten, a direct value for those respondents who stated null confidence in the government isn't possible. Therefore, the values were re-scaled between one and two in order to compute *relative confidence rate*, whose values were then re-scaled between zero (complete confidence in the government over the opposition) and one (complete confidence in the opposition over the government): the higher the *relative confidence rate* the higher the confidence in the opposition over the government and a value of 0.50 identifies a respondent expressing equal confidence in both political actors This measure has mean equal to 0.30 (SD = 0.27).

Two further independent variables are used to provide a measure of attitudes towards the trade-offs between the economic situation and personal freedom with respect to lockdown, and were measured with a 5-point Likert scale. The question for the former was: "Please, where do you place yourself on the following alternatives. In the face of the health emergency: Confinement at home should be maintained as long as possible even if this

entails a deterioration in economic conditions and an increase in unemployment (1) – Confinement at home should be more flexible in order to reactivate the economy as soon as possible even if this may entail a higher spread of the virus (5)"[13]. For the trade-off on personal freedom, respondents were asked to answer the following: "According to the measures employed to deal with the ongoing pandemic, what is your opinion? Do you believe that it would be better: To contain the infections even at the cost of restricting personal freedom (1) – To not enforce restrictive measures on personal freedom even at the cost of increasing infections (5)"[14]. Both the variables were re-scaled between zero (a preference for harsh measures aimed at containing the infection rate) and one (a preference for re-opening aimed at aiding economic recovery and for personal freedom even if this may cause a rise in infections). The two measures have a mean of 0.58 (SD = 0.35) and 0.42 (SD = 0.33) respectively. TABLE 2 shows the Pearson's correlation indexes for the association of the dependent variable with the three measures: *relative confidence rate*, economy/lockdown and personal freedom/lockdown. The *relative confidence rate* shows positive and moderate associations with both attitudes towards lockdown. Indeed, according to the competing frames outlined previously, the opposition pursued a narrative centered on the importance of reopening over containment of the virus (Bobba, Hubé, 2021; Barbieri,

[13] The Italian version of the question is: "Per favore, indichi la Sua posizione rispetto alle seguenti alternative. Di fronte all'emergenza sanitaria: Si deve mantenere il più possibile il confinamento a casa anche se questo comporta un peggioramento delle condizioni economiche e un aumento della disoccupazione (1) - Si deve rendere più flessibile il confinamento a casa per riattivare quanto prima l'economia anche se questo può comportare una maggiore propagazione del virus (5)".

[14] The Italian version of the question is: "In merito alle misure adottate per fronteggiare la pandemia in corso, lei dove collocherebbe la sua opinione? Lei ritiene che si dovrebbe: Contenere il contagio anche a costo di limitare la libertà personale (1) – Non applicare rigide misure restrittive sulla libertà personale anche a costo di estendere il contagio (5)".

Bonini, 2021). The bivariate correlations shown in TABLE 2 suggest that respondents with more confidence in the opposition than the government preferred reopening to lockdown and stated lower levels of risk perception. Moreover, those who expressed positive attitudes to economic recovery and personal freedom over lockdown are associated with lower levels of risk perception as well[15].

*TABLE 2. The Pearson's correlation coefficients between the measures of risk perception, relative confidence rate and attitudes. Weighted data. N = 1,704. *p < 0.10; **p < 0.05; ***p < 0.01.*

	Risk perception	Relative confidence rate (opposition over government)	Preference for economy over lockdown	Preference for freedom over lockdown
Risk perception	1.00			
Relative confidence rate (opposition over government)	-0.31***	1.00		
Preference for economy over lockdown	-0.50***	0.56***	1.00	
Preference for freedom over lockdown	-0.43***	0.49***	0.63***	1.00

Confidence in a political actor is assumed as a proxy measure for an individual's closeness to a frame (Shao, Hao, 2020). In particular, according to the frames of the pandemic supplied by the political actors, and to the correlations observed in TABLE 2, it is hypothesized that the more a respondent had confidence in the opposition over the government, the closer they were to the opposition's frame, and the lower their level of risk perception was. And conversely, *the higher a respondent's level of approval of the government and its policies, the higher their level of perceived risk* (*H1*). Furthermore, it is

[15] According to *H1*, *relative confidence rate* constitutes the key independent variable in the analyses, whereas the two attitudes are the independent variables employed to test *H2* and *H3*.

hypothesized that *these patterns are mitigated by attitudes towards the trade-offs economy/lockdown and personal freedom/lockdown* (*H2*) in line with the topics of debate within the frames supplied by government and opposition. Finally, it is hypothesized that on introducing these *attitude variables (preference for the economy over lockdown and personal freedom over lockdown) they do not nullify the effect of socio-demographic factors and social position on the level of risk perceived by respondents* (*H3*).

2.2. Socio-demographic factors and social positions

The associations of the dependent variable with socio-demographic factors and social positions are assessed by observing how the mean of risk perception differs according to the attributes defined by the categories of the independent variables. The consistent gender and age gaps found by psychometric risk analyses are shown in TABLE 3: women and the elderly show more concern than men and younger people respectively. The previous findings concerning the different levels of Covid-19 risk perception according to the level of infection in the respondent's area of residence are corroborated in TABLE 3. Indeed, the highest average level of risk perception is detected in the north west of Italy, one of the areas characterized by the highest rate of infection in the world.

*TABLE 3. Mean of risk perception (rescaled between zero and one) between men and women, across age classes and across residence areas (NUTS 1). N = 1,704. *p < 0.10; **p < 0.05; ***p < 0.01.*

	Count	Percentage	Risk perception (mean)	◘	SD
Gender					
Men	821	48.2%	0.61		
Women	883	51.8%	0.67	0.05***	0.01
Age (classes)					
18-34	553	32.5%	0.63		

35-64	953	55.9%	0.63	0.00	0.02
65+	198	11.6%	0.73	0.11***	0.02
Residence area (NUTS 1)					
North West	447	26.2%	0.69		
North East	323	18.9%	0.62	-0.07***	0.02
Center	332	19.5%	0.60	-0.09***	0.02
South and Islands	602	35.4%	0.64	-0.05***	0.02

The social position of a respondent is accounted for by educational attainment and social class. Although the literature does not show a common pattern as regards the association of these factors with risk perception (Lewis *et al.*, 2019 and Shao, Hao, 2020) TABLE 4 show that the most worried groups are those respondents declaring a secondary or lower level of education *and* working as production workers, clerks or socio-cultural professionals.

TABLE 4. Mean of risk perception (rescaled between zero and one) across levels of education (ISCED 3) and across social classes[16]*. N = 1,704. *p < 0.10; **p < 0.05; ***p < 0.01.*

	Count	Percentage	Risk perception (mean)	◘	SD
Education level (ISCED 3)					
Secondary or lower	111	6.5%	0.70		
Upper-secondary	686	40.3%	0.62	-0.07***	0.03
Post-secondary or tertiary	907	53.2%	0.64	-0.06**	0.03
Social class					
Clerks	332	19.5%	0.65		
Self-employed professionals and large employers	216	12.7%	0.59	-0.06**	0.02
Small business owners	303	17.8%	0.62	-0.03	0.02
Technical professionals	124	7.3%	0.61	-0.04	0.03
Production workers	203	11.9%	0.66	0.01	0.02
Managers	127	7.4%	0.64	-0.01	0.03
Socio-cultural professionals	260	15.3%	0.71	0.06**	0.02
Service workers	139	8.1%	0.60	-0.05*	0.03

[16] Oesch's (2006) 8-class schema. The unemployed, retired, those unable to work, and students are codified according to their last job or the job of one of their family members. According to this schema, socio-cultural professionals include those professionals/managerial jobs endowed with highly marketable skills and characterized by an interpersonal work logic, *e.g.* medical doctors and university/school teachers.

2.3. Direct experience of Covid-19 infection and reopening approach

Two further variables are considered, concerning the direct experience of infection and the period of data collection:

- the respondents were asked to point out if they and/or any of their relatives or close acquaintances had been infected;
- given that the data collection period spanned the last week of April 2020 to the day before the 'reopening' of almost all activities in the country on 18 May 2020, it is a matter of interest to observe whether getting close to the end of lockdown affected risk perception.

As shown in TABLE 5, higher levels of concern are observed among those who stated a direct experience of the infection. TABLE 5 also shows that the awareness of this 'reopening' day (18 May 2020) is associated with a lower mean of risk perception (0.61)[17]. Indeed, Italians had seen an initial loosening of the harsh measures on 4 May, having been informed about the imminent 'reopening' at the end of April[18].

*TABLE 5. Mean of risk perception (rescaled between zero and one) between the respondents who had or did not have direct experience of infection and between prior to and after 4 May 2020. N = 1,704. *p < 0.10; **p < 0.05; ***p < 0.01.*

	Count	Percentage	Risk perception (mean)	◘	SD
Direct experience of infection					
No	857	50.3%	0.62		
Yes	847	49.7%	0.66	0.03**	0.01
Data collection period					
26/04/2020 - 03/05/2020	727	42.7%	0.69		
04/05/2020 - 17/05/2020	977	57.3%	0.60	-0.09***	0.01

[17] The variable is generated according to the day of response and is dichotomized between prior to and after the first 'reopening' measures.
[18] Lanciano *et al.* (2020) provide an accurate schematization of the three phases set by the Italian government to cope with the COVID-19 emergency.

3. Results

TABLE 6 shows the three linear regression models performed. Model 1 (M1) includes socio-demographic variables and the direct experience of infection. The results corroborate the aforementioned associations of risk perception with gender, age and area of residence: women and people over 65 are significantly more concerned than men (+5%) and people under the age of 35 (+10%) respectively; and respondents from the north west of Italy have the highest risk perception measure. With regard to social status, those declaring an upper-secondary level of education are significantly less concerned than the others, whereas socio-cultural professionals are the most worried social class. Approaching the end of lockdown is associated with a decrease in risk perception (-8%), and the coefficient concerning the direct experience of infection, although positive, is not statistically significant[19].

Model 2 (M2) introduces the *relative confidence rate* in the opposition over the government. In agreement with hypothesis (*H1*), this rate is negatively associated with the dependent variable: all other conditions being equal, respondents who stated a complete confidence in the opposition and a null confidence in the government show a mean of risk perception 27% lower than respondents who stated the opposite. The introduction of this

[19] For a thorough presentation of the results of Model 1, see Marchesi and De Luigi (2022).

variable more than halved the gender gap between women and men (from +5% in M1 to +2% in M2) and almost halved the difference between the two data collection periods (from +8% in M1 to +5% in M2), which nevertheless remains particularly relevant. The differences between young people and adults, on the one hand, and the elderly on the other, remain equally large: perception of risk for the elderly is in fact reduced by only 1%. Other decreases in the coefficients are also detected for education level and socio-cultural professionals. However, ~~as hypothesized (*H2*),~~ the effects of these socio-demographic factors, although reduced, remain prominent in influencing the average level of risk perception. It must also be noted that controlling for the *relative confidence rate* increases the difference between the north west and the south and islands (from -2% to -4%): respondents from the south and in the islands showing the lowest average rate, and those resident in the north west the highest average rate. Therefore, considering that this rate is negatively associated with the independent variable, without controlling for the rate, the difference between the areas is observed to be smaller than it actually is.

Finally, Model 3 (M3) introduces the attitudes to the two trade-offs. The two variables are negatively associated with risk perception: all other conditions being equal, those respondents who completely preferred economic recovery over lockdown showed a risk perception 15% lower than those who stated the opposite, and those respondents who completely preferred personal freedom over lockdown showed a risk perception 28% lower than those who stated the opposite. These associations set to zero the association between the dependent variable and the *relative confidence rate*: the association between the *relative confidence rate* and risk perception is completely explained by the two trade-off attitudes

introduced here and corroborates hypothesis (*H2*). The introduction of the variables also decreased the coefficients pertaining to gender, area of residence[20], education, service workers, and the period of data collection. However, it did not nullify the entire set of associations of the dependent variable with socio-demographic factors and social positions (*H3*). Indeed, the differences for the age groups, tied to the Covid-19 mortality rates (see Marchesi, De Luigi, 2022), and the difference for socio-cultural professionals increased in M3, and only the difference between those resident in the north west and those resident in the north east is no longer statistically significant. Figure 1 shows the marginal means of risk perception for age groups and residence areas for each of the three models[21]. It can be stated that the confidence in political actors affected the level of risk perceived by the respondents during the lockdown, and that such an effect is explained by orientations towards the economy and personal freedom. However, the differences observed among social groups remain prominent factors that affect the perception of risk even when political attitudes are taken into account.

*TABLE 6. Linear regression models with risk perception as the dependent variable. M1 includes only socio-demographic variables and the direct experience of infection. M2 introduces the relative confidence rate. M3 introduces attitudes towards economy/lockdown and freedom/lockdown. *p < 0.10; **p < 0.05; ***p < 0.01.*

	M1	**M2**	**M3**
Women	0.05***	0.02*	0.01

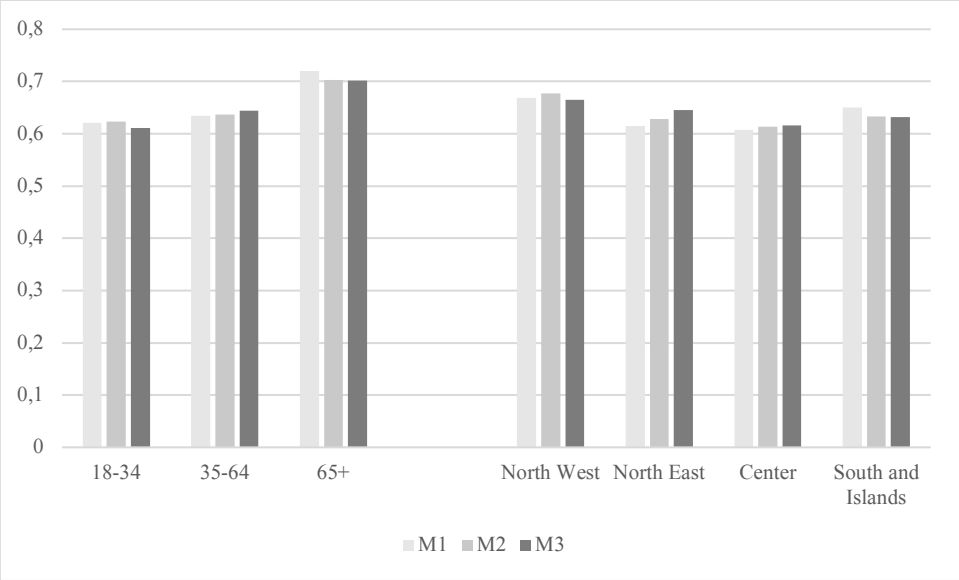
[20] It must be stressed that the coefficients pertaining to the area of residence decrease with respect to both M1 and M2 as far as the north east and center are concerned. The difference in risk perception between the north west and the south and islands increases in M3 (-3%) with respect to M1 (-2%), and decreases in M3 with respect to M2 (-4%).

[21] With reference to Figure 1., it should be noted that younger and elderly respondents are associated with a lower mean value in the full model (M3) than that in the first model (M1), whereas the opposite pattern is shown as concerns the 35-64 age group. For areas of residence: lower mean values of risk perception are observed in M3 than in M1 for the north west and the south and islands.

	(0.02)	(0.01)	(0.01)
Age (ref. 18-34)			
35-64	0.01	0.02	0.03**
	(0.02)	(0.02)	(0.01)
65+	0.10***	0.09***	0.09***
	(0.02)	(0.02)	(0.02)
Residence area (ref. north west)			
North east	-0.05***	-0.05***	-0.02
	(0.02)	(0.02)	(0.01)
Center	-0.06***	-0.06***	-0.05***
	(0.02)	(0.02)	(0.02)
South and islands	-0.02	-0.04**	-0.03**
	(0.02)	(0.02)	(0.02)
Education level (ref. Secondary or lower)			
Upper-secondary	-0.06**	-0.05*	-0.02
	(0.03)	(0.03)	(0.02)
Post-secondary or tertiary	-0.04	-0.03	-0.00
	(0.03)	(0.03)	(0.03)
Social class (ref. Clerks)			
Self-employed professionals and large employers	-0.04	-0.03	-0.01
	(0.03)	(0.03)	(0.02)
Small business owners	-0.02	-0.01	0.00
	(0.02)	(0.02)	(0.02)
Technical professionals	-0.02	-0.02	-0.01
	(0.03)	(0.03)	(0.03)
Production workers	0.03	0.02	0.03
	(0.02)	(0.02)	(0.02)
Managers	-0.01	-0.02	0.00
	(0.03)	(0.03)	(0.03)
Socio-cultural professionals	0.05**	0.04*	0.05**
	(0.03)	(0.02)	(0.02)
Service workers	-0.05	-0.05*	-0.03
	(0.03)	(0.03)	(0.03)
Direct experience of infection	0.02	0.02	0.02
	(0.02)	(0.01)	(0.01)
Data collection period: 04/05/2020 - 17/05/2020 (ref. 26/04/2020 - 03/05/2020)	-0.08***	-0.05***	-0.02
	(0.02)	(0.02)	(0.01)
Relative confidence rate (opposition over government)		-0.27***	0.00
		(0.03)	(0.03)
Preference for economy over lockdown			-0.15***
			(0.02)
Preference for freedom over lockdown			-0.28***
			(0.03)
Constant	0.71***	0.78***	0.84***
	(0.04)	(0.04)	(0.03)

Adj-R^2	0.08	0.15	0.31
N	1,704	1,704	1,704

Figure 1. Marginal means of risk perception for age groups and areas of residence.



4. Concluding remarks and limitations

This paper contributes empirically to the assessment of connections between socio-demographic patterns of the perception of risk associated with the Covid-19 pandemic and the adoption of interpretative frames provided by political actors during the first Italian lockdown. According to literature, socio-demographic characteristics such as socio-economic status, gender, or age, have been identified as crucial factors for predicting not only risk perception but also protective health behavior. However, the 'uncertainty'

characterizing the extra-ordinariness of events such as pandemics and epidemics is associated with the production of interpretative frames by specific actors, perceived as authorized to define the phenomenon (Staniland, Smith, 2013). Among these 'authorities', political actors compete for the approval of their frames, which have direct consequences on the risk the public (the potential electorate) ascribes to the phenomenon and on the measures taken to deal with it (see Bobba, Hubé, 2021). Indeed, government actions have direct consequences on the organization of health services (see Guglielmi *et al.*, 2020). However, a person's position in the pre-existing political competition constitutes a political bias (Barrios, Hochberg, 2020), which filters the information provided by the politicization of the specific 'uncertain' event (Shao, Hao, 2020).

The results provided in the third section clearly show that during the first Italian lockdown women, elderly people, those who live in the north of Italy, and those who declare an upper-secondary level of education or a job in the socio-cultural professionals social class are the most concerned about the virus. Once confidence in the parties of the opposition or the government is accounted for as a proxy for the adoption of a specific frame, two patterns emerge.

- First, those respondents who stated a higher confidence in the opposition over the government show a lower level of concern than those who stated a higher confidence in the government over the opposition. It should be noted that previous empirical literature has found that greater satisfaction with the performance of the government is associated with higher levels of compliance (see Guglielmi *et al.*, 2020).

- Second, the aforementioned socio-demographic patterns of risk perception are only slightly affected.

As the politicization of the pandemic was primarily grounded on trade-offs between the economic situation and personal freedom with respect to the harsh lockdown measures taken to limit infections (see Bertero, Seddone, 2021), the attitudes of respondents to these two trade-offs are incorporated into the analysis. Those respondents who preferred economic recovery and personal freedom over lockdown measures show a lower concern than those who supported the measures. Since the political competition between government and opposition was primarily based on these two trade-offs, these associations completely explain the association between confidence in political actors and risk perception. Therefore, the political preferences of respondents during lockdown are shown to have been based on these two topics, which had direct consequences on the management of the pandemic in the country. However, accounting for these two trade-offs does not completely explain the risk perception patterns based on socio-demographic characteristics and social positions. Indeed, elderly people, those resident in the north of Italy and socio-cultural professionals are still the most worried. It must be stressed that the first two patterns are tied to mortality and infection rates, whereas socio-cultural professionals include people engaged in interpersonal tasks and therefore with a higher likelihood of infection (Marchesi, De Luigi, 2022).

According to these results, it can be stated that the politicization of the Covid-19 pandemic affected risk perception during the first Italian lockdown, along the trade-offs between economic recovery and personal freedom over measures to limit infections. However, such a politicization process does not explain the socio-demographic patterns of

risk perception, as far as age, area of residence and specific jobs are concerned. Therefore, the effect of the political competition, albeit fundamental in understanding risk perception about Covid-19, does not 'incorporate' the totality of the patterns revealed.

To conclude, there are several limitations to the present study. Apart from the non-representativeness of the sample, the focus on a single country and on a specific time span does not enable us either to generalize the findings or assess the causal relationships between the variables concerned. Second, the measure of risk perception adopted in this paper does not account for the different facets that define the concept. Third, future analyses based on larger samples should pay attention to contextual effects concerning infection and morality rates, the economy and the political competition, and how these all change over time. Accounting for the 'local' dimension may provide further insight into the theoretical and empirical analysis of risk perception, especially for the study of those events for which governments delegate specific decisions to local authorities. To conclude, the image of political leaders during the pandemic that emerged in public opinion constitutes a specific set of emotions affecting people's support for political actors, whether in government or in opposition. The introduction of these elements in the analyses should shed light on the rally-round-the-flag effect during the pandemic in Italy (see Loner, 2022).

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