Measuring Perceptions and Preferences for Meritocracy

Juan Carlos Castillo, Julio Iturra & Francisco Meneses

Abstract

Economic and social inequality have raised growing concerns and crises across societies. One of social science concepts associated to the maintenance of inequality is the belief in meritocracy, which would legitimize economic differences based on criteria such as effort and talent. Despite its wide use, empirical research on meritocracy is something relatively novel. A number of studies have relied mostly in secondary data to operationalize meritocracy, with a large variation in the use and interpretation of survey items. Starting from a review of studies that measure meritocracy, this article identifies a series of drawbacks and inconsistencies within and between studies regarding the conceptualization and indicators of meritocracy. Based on this critical analysis, we propose an item's battery called *Perceptions and Preferences for Meritocracy Scale*, which is tested with confirmatory factor analysis with data from an online survey study (N=2,141). The results support the proposed conceptual structure which not only distinguishes between perceptions and preferences, but also between meritocratic and non-meritocratic dimensions. The discussion highlights the relevance of considering these different dimensions in order to advance in the study of meritocracy.

1 Introducción

La desigualdad económica se ha vuelto un tema que genera creciente preocupación y malestar alrededor del mundo. Esto se ha expresado en una serie de protestas como la emblemática "occupy wall street" el año 2011, así como también en una serie de análisis críticos respecto del desarrollo del capitalismo y sus consecuencias (Piketty 2014). En este contexto, el estudio de las visiones, preferencias y percepciones respecto de la desigualdad han adquirido relevancia en las ciencias sociales, en temas como las preferencias redistributivas (Alesina and Angeletos 2005; Dimick, Rueda, and Stegmueller 2018) la legitimación de la desigualdad económica (Schröder 2017) y el funcionamiento de la meritocracia (Duru-Bellat and Tenret 2012; Mijs 2019; Reynolds and Xian 2014).

En general, la meritocracia se define como un sistema de distribución de recursos y recompensas basados en el mérito individual, que en su concepción original es una suma de talento y esfuerzo (Young 1962). Esta concepción tradicional de mérito sitúa en un lugar secundario la posible interferencia de factores estructurales o no meritocráticos como la herencia, los contactos personales, o la suerte (Breen and Goldthorpe 1999; Saunders 1995; Yair 2007; Land 2006; Young 1994). Desde la psicología social y la sociología se han estudiado las características y consecuencias de las creencias en la meritocracia, en general basados en la hipótesis que mayor creencia en la meritocracia lleva a una mayor legitimación de las desigualdades (Preminger 2020; Trump 2020; Hadjar 2008; Madeira et al. 2019). Tales investigaciones han planteado críticas a la realización de este estándar moral de distribución, argumentando que sería una promesa incumplida dada la influencia preponderante de otros elementos más allá del mérito en el estatus individual (Witteveen and Attewell 2020; Arrow, Bowles, and Durlauf 2000; Goldthorpe 2003; Markovits 2019; Khan 2013).

Debido al rol que cumplen las creencias meritocráticas dentro del pensamiento neoliberal (Bay-Cheng et al. 2015), han surgido múltiples investigaciones que evalúan la relación entre creencias meritocráticas y diversos ámbitos sociales de la actualidad. Por ejemplo, se han desarrollado estudios que vinculan la meritocracia al reforzamiento de estereotipos socioeconómicos, de

género y de etnias (Madeira et al. 2019; Girerd and Bonnot 2020a; Preminger 2020), así como también líneas de investigación que evalúan el efecto de las creencias meritocráticas en el contexto educativo (Generett and Olson 2020; Owens and St Croix 2020) y en el contexto organizacional de las empresas (Pérez and Sabelis 2020; Aiello, Cardamone, and Pupo 2019).

Para poder dar cuenta de los niveles de creencia en la meritocracia los estudios a la fecha generalmente han utilizado algunos indicadores de encuestas ya existentes, y en menor medida se han creado instrumentos ad-hoc. Sin embargo, y como mostraremos más adelante, las formas de medición de meritocracia varían extremadamente entre estudios. Muchas veces fenómenos similares se asocian a indicadores distintos, y también ocurre que fenómenos distintos son medidos con indicadores similares, todo lo cual dificulta la comparabilidad entre investigaciones y avanzar en la comprensión y estudio de la meritocracia.

Basados en el análisis crítico de las formas de medición de meritocracia a la fecha, el presente artículo propone un instrumento para medir y relacionar dos aspectos claves en el estudio de la meritocracia: percepciones y preferencias. Además, como un segundo eje de análisis considera la generación de indicadores respecto de aspectos meritocráticos y anti-meritocráticos, demostrando que no son los dos polos de un mismo continuo como muchos estudios anteriores parecen sugerir. La propuesta de medición además está orientada a generar un instrumento lo más breve posible de manera que pueda ser utilizado en encuestas de opinión pública y así ser estudiado en relación a otros fenómenos sociales.

2 La medición de los aspectos subjetivos de la meritocracia

A continuación se presenta una revisión de una serie de investigaciones que se han abocado al estudio de la meritocracia y que para ello han hecho una propuesta de medición. El primer eje de análisis tiene que ver con el uso del concepto "creencias" para referir a distintos aspectos subjetivos relacionados con meritocracia. El segundo eje tiene que ver con el uso de indicadores sobre aspectos anti-meritocráticos como el polo opuesto de los meritocráticos.

The black-box of meritocratic beliefs

Several approaches to the empirical study of meritocracy based on public opinion surveys make reference to the concept of *beliefs*, but behind this concept there are usually different meanings and operationalizations. To illustrate this point in the following we will start with the proposal from a recent paper by Mijs (2019), which we will take as a reference to discuss previous studies on meritocracy.

The meritocratic beliefs' definition of Mijs is the following: "when I discuss meritocracy beliefs, I am referring to citizens' belief in the importance of hard work relative to structural factors." (Mijs 2019, pg.9). In the operationalization, this is associated with the following indicator: "how important you think it is for getting ahead in life: (a) hard work", scored in a 1 to 5 likert scale. There are several assumptions behind this decision that are worth discussing and that are related to previous assumptions in the study of meritocracy.

a. *Dimensionality*

The item used by Mijs (2019) is part of an items' battery present in several international surveys, usually called "reasons to get ahead". This battery presents a series of indicators related to what people consider important to get ahead in life: hard

work, education, ambition, wealthy family, right connections, religion, race and gender. Therefore, for Mijs other aspects such as education, that could be associated to talent, are not meritocratic. As he points out: "Hard work is arguably the most meritocratic part of Michael Young's equation, 'Merit = Intelligence + Effort', for the simple fact that intelligence itself is conditioned by a nonmeritocratic factor: who your parents happen to be" (p.5).

In Mijs' proposal we can observe a couple of strong assumptions: effort would not depend on parents influence, and talent is not meritocratic (contrary to Michael Youngs original conceptualization). The problem of whether talent is or not meritocratic is certainly an interesting point to discuss, but for those working based on empirical data it is something that should be empirically tested. Is effort the only dimension behind the concept of meritocracy, or is it a multidimensional concept that includes other elements as talent (as in its original conceptualization)? This conceptual and measurement unidimensional assumption it is possible to find in other studies that assume that effort is the main and only aspect of meritocracy (Girerd and Bonnot 2020b; Bubak 2019).

b. Beliefs

The "reasons to get ahead" battery refers to "how important you think it is", considered by Mijs (2019) as a belief in meritocracy for the item regarding effort. Nevertheless, another version of this same battery used in several surveys is "how important you think it *should* be". Therefore, the question raised here is: Which one of both is a "belief"? According to Janmaat (2013): "Perceptions refer to subjective estimates of existing inequality (i.e. thoughts about what is). Beliefs are here defined as normative ideas about just inequality (i.e. thoughts about what should be)"(p.359). Therefore, the referred paper would be using the term beliefs (what should be) referring actually to perceptions (what is). The same occurs in studies as the one by Reynolds and Xian (2014), who explicitly use the term beliefs to talk about perceptions, whereas other authors use general terms as attitudes (Kunovich and Slomczynski (2007)). The first attempt to shed light on this confusion was made by Duru-Bellat and Tenret (2012), who used the item "how important should the number of years spent in education and training be in deciding how much money people ought to earn?" for "desired" meritocracy (beliefs), whereas for "perceived" meritocracy they use two items: "Would you say that in your country, people are rewarded for their efforts?" and "... people are rewarded for their skills?".

Is the belief in meritocracy a perception or a desire/preference? In order to expand the analytical conceptual framework, we believe that both dimensions should be included in the analysis, as proposed by Duru-Bellat and Tenret (2012). This opens up possibilities of analyzing whether perceptions and preferences are actually related (i.e. correlation close to 1) or whether they are different aspects of the same phenomenon. As Son Hing et al. (2011) have pointed out, "People can believe that outcomes ought to be distributed on the basis of merit and yet vary in their perceptions of whether this is how society currently operates" (p. 435). In other words, normative beliefs should be interpreted taken perception into account: a large normative belief in meritocracy certainly means something totally different for someone perceiving high meritocracy than for someone perceiving low meritocracy. In order to avoid the confusion generated by the term "belief", we propose the terms meritocratic preferences and meritocratic perceptions, as they better reflect the two dimension under scrutiny.

c. Non-meritocratic aspects

Mijs (2019) makes reference to some non-meritocratic aspects as talent, which is ruled out of the operationalization of meritocracy. A different approach was followed by Kunovich and Slomczynski (2007), who decide to include some non-meritocratic

elements. Using the items' battery listing a number of reasons about "How important should be in deciding pay…" (as Duru-Bellat and Tenret (2012) for desired meritocracy), they decided that reasons as education and responsibility are meritocratic and pointed 1 if considered essential, whereas reasons such as having a family and children were pointed 1 if they were considered "not important at all" (i.e. reverse coded). A similar approach was taken by Newman, Johnston, and Lown (2015), reverse-coding non-meritocratic items, the same principle applied in the "Preference for the Merit Principle Scale" (Davey et al. 1999).

The assumption that meritocratic and non-meritocratic elements are the poles of the same continuum was analyzed by Reynolds and Xian (2014) using the "get ahead" perceptions' battery items mentioned above. They consider education, ambition and hard work as meritocratic and other reasons such as wealthy family and right connections and non-mertitocratic. Nevertheless, despite making this distinction the author ends up subtracting one dimension from the other, assuming that they are two poles of the same continuum as Kunovich and Slomczynski (2007) did. Still, taking into account this research perspective, we suggest that non-meritocratic aspects should be part of a meritocratic measurement but taken independently and not adding or subtracting from meritocratic ones unless it is empirically proved that they belong to the same conceptual dimension.

d. Accounting for measurement error

Finally, most of the studies in meritocracy so far have not incorporated the issue of measurement error (Brown 2010; Bollen 1989), using single indicators and/or simple average indexes for measuring meritocracy. Such strategy assumes that the latent construct is measured perfectly by the indicators chosen, going as far as proposing that "… In choosing this strategy of index construction, we argue that *support for meritocracy is not a latent variable* (Kunovich and Slomczynski 2007, 653–54). Some advances were done by Reynolds and Xian (2014) by doing a principal component analysis of meritocratic and non-meritocratic dimensions, but somewhat contradictorily, they end up in a sum index despite proving a multidimensional latent structure.

An instrument proposal

Based on the previous limitations and assumptions in the measurement of meritocracy presented in the previous section, in this paper we propose and test an instrument with the following characteristics:

- *Multidimensional*, incorporating previous distinctions between preferences and perceptions as well as between meritocratic and non-meritocratic aspects.
- Multiple indicators for each dimension, in order to *account for measurement error* in a confirmatory factor analysis context.
- Based on *previous indicators* as far as possible, for the sake of comparability between studies
- *Brief*, as to be used in regular public opinion surveys. In this point it differs for instance from the proposal of the "Preference for the Merit Principle Scale" (Davey et al. 1999), as they use 15 items just for one dimension (besides the problem of reverse-coding non-meritocratic items).

The proposed measurement framework is depicted in Figure 1:

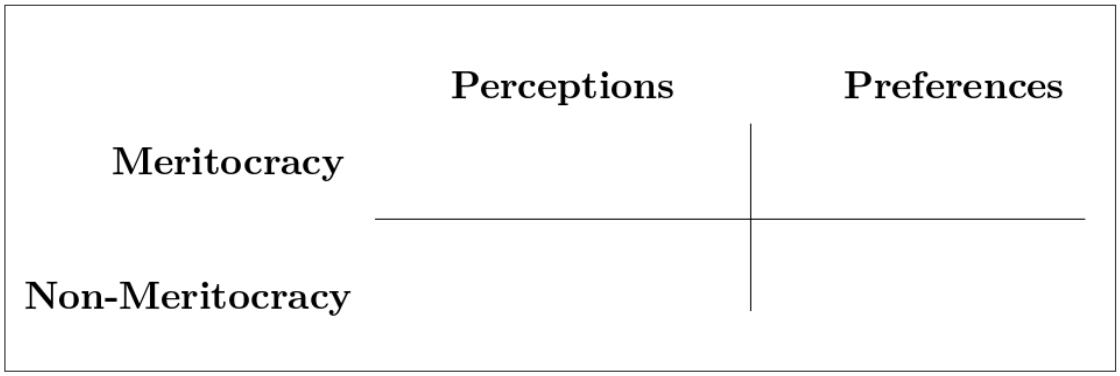

Figure 1: Model of perception and preferences for meritocracy and non-meritocracy

The columns Perceptions and Preferences represent the distinction between this two concepts, usually confused under the label "beliefs". Perceptions refers to the extent to which people observe that meritocracy functions or applies in their society, which in terms of measurement relates to items such as "I think hard work is important to get ahead in society", whereas preferences refer to normative expectations that are usually linked to a "should" expression (e.g. whether hard work should be related to payment). The rows in the table of Figure 1 consider the distinction between meritocratic and non-meritocratic dimensions (Reynolds and Xian 2014). This aspect has been usually treated as different ends of a same continuum in part of the previous research, an assumption that requieres empirical scrutiny. These non-meritocratic elements usually refer to the use of personal contacts or family advantages to get ahead in life.

Regarding the selection of indicators, most of them are taken or adapted from previous studies for the sake of comparability. For meritocratic indicators we use effort and talent as the main components of the traditional concept of merit as defined by Young (1962), whereas for non-meritocratic dimensions we use having rich parents and good contacts. The description of the specific items is presented in the methodology section.

The research hypotheses behind this conceptualization and measurement model are the following:

- H_1. The perception of meritocracy is a latent variable based on indicators of the importance attributed to talent and the effort to get ahead in life.
- H_2. The non-meritocratic perception is a latent variable that derives from two indicators related to the agreement with the statement that people with contacts and rich parents manage to get ahead.
- H_3. Meritocratic preferences are a latent variable based on a normative value of effort and talent.
- H_4. Non-meritocratic preferences are a latent variable based on the normative value of the use of personal contacts and having rich parents.

3 Methodology

Data collection

The data was obtained through an online questionnaire which was part of a larger study on meritocracy and preferences developed in Chile in 2019 and funded by the national scientific agency FONDECYT. The questionnaire was programmed in Qualtrics and the fieldwork was in charge of an external online survey agency (netquest.cl) during December 2019 and January 2020. The sample was selected from a non-probabilistic quota design in three large cities in Chile. The quotas were generated based on the survey of the Public Studies Center (CEP, 2019), which has a high prestige in the country and is also the counterpart agency of ISSP (International Social Survey Programme) in Chile. A total sample of 2,141 people was collected, excluding those who did not answer the questions on the scale and those who did not accept informed consent. As it usually occurs online samples, there were some limitations in achieving the quotas for lower educational levels.

3.1 Instrument design

The proposed scale of perceptions and preferences about meritocracy consists of 8 indicators that are grouped into the 4 dimensions referred above: Perceptions (meritocratic/non-meritocratic) and preferences (meritocratic/non-meritocratic). In order to achieve at least some comparability with previous studies, the questions were adapted from the items battery "reasons to get ahead" (ISSP/GSS), which are mostly used for operationalizing meritocracy (Mijs 2019; Duru-Bellat and Tenret 2012; Reynolds and Xian 2014). The eight items ordered according to dimensions are presented in Table 1. These 8 likert-type items have 5 response alternatives ranging from "Completely disagree"(1) to "Completely agree" (5).

Table 1: Items according to dimension.

Dimension	Factor	Statement (english)	Statement (spanish)
Perception	Meritocratic	Those who try harder get greater rewards than those who work less.	Quienes más se esfuerzan logran obtener mayores recompensas que quienes se esfuerzan menos.
		Those who have more talent achieve greater rewards than those who have less talent.	Quienes poseen más talento logran obtener mayores recompensas que quienes poseen menos talento.
	Non meritocratic	Those who have rich parents succeed.	Quienes tienen padres ricos logran salir adelante.
		Those who have good contacts succeed.	Quienes tienen buenos contactos logran salir adelante.
Preference	Meritocratic	Those who try harder should get greater rewards than those who work less.	Quienes más se esfuerzan deberían obtener mayores recompensas que quienes se esfuerzan menos.
		Those who have more talent should get greater rewards than those who have less talent.	Quienes poseen más talento deberían obtener mayores recompensas que quienes poseen menos talento.
	Non meritocratic	It's fine that those with rich parents get ahead.	Está bien que quienes tienen padres ricos salgan adelante.
		It's fine that those who have good contacts get ahead.	Está bien que quienes tienen buenos contactos salgan adelante.

3.2 Administration sets

With the objective of evaluating the effect of the indicators ordering, the respondents (*n = 2141*) were randomly divided into three different order versions as explained in Figure 2. The scale was presented to the first group (*n = 712*) in the order that appears in Table 2. For the second group (*n = 717*), the order of the items was organized according to the topics of the items, e.g. for the topic of hard work the item about perception was followed by the item about preference, and te same for the rest of the topics. Finally, for the third group (*n = 712*) the items were completely randomized.

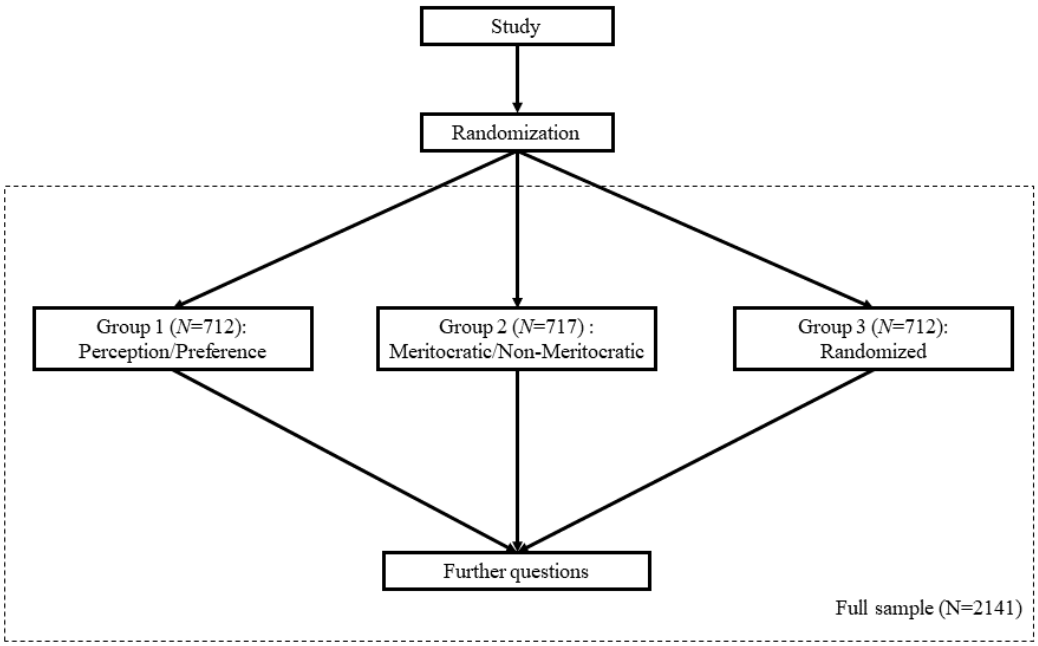

Figure 2: Survey flow

4 Methods

For testing the scale's underlying constructs we estimate confirmatory factor analysis models (CFA). The model estimates one factor for each dimension, as represented in the following figure:

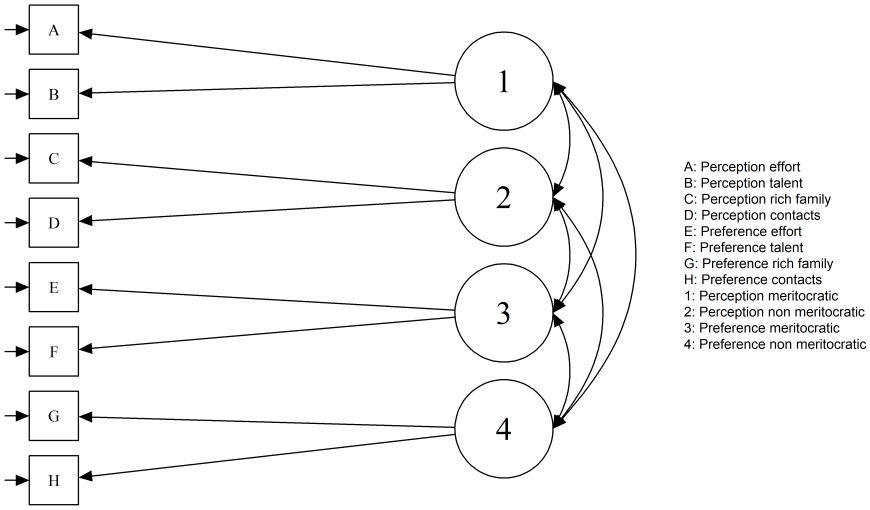

Figure 3: Theorical model

CFA was conducted using the `lavaan` R package (version 0.6-3; Rosseel, 2020) with diagonally weighted least squares (DWLS) estimation due to the items' ordinal level of measurement (Kline, 2016; Rosseel, 2020). As recommended by Brown (2008), we assessed model fit by jointly considering the comparative fit index and Tucker-Lewis Index (CFI and TLI; acceptable fit > 0.95), Root of the average squared residual approximation (RMSEA; acceptable fit < 0.08), Chi-square: (p-value; acceptable fit > 0.05, and Chi-square ratio:> 3).

A pre-registration was made in the OSF platform, available in the following link: https://osf.io/z45y2. In this pre-registration are the hypothesis regarding the four-dimensional conceptual model underlying the scale, the variables measurement levels, the statistical tests to be performed with their respective evaluation parameters, along with other important aspects of the research design.

5 Results

5.1 Descriptive analysis

Como puede observarse en la tabla 2, los indicadores poseen valores que van desde el 1 (totalmente en desacuerdo) al 5 (totalmente de acuerdo). Se observan promedios desde 2.41 correspondiente a preferencia-contactos, hasta 3.89 correspondiente a la preferencia-esfuerzo. Ambos indicadores son coherentes con la adhesión general a la meritocracia reportada en estudios previos, privilegiando aspectos individuales como el esfuerzo.

Los gráficos presentados en la Figura 4 presentan información desagregada y comparable de las distintas categorías de respuesta de cada item. Se observa que en general hay una mayor percepción de elementos no meritocráticos que meritocráticos, mientras que en el caso de preferencias ocurre lo opuesto. En cuanto a las preferencias, llama la atención el rol preponderante

Table 2: Descriptive statistics of the scale.

	Mean	SD	Min	Max
A. Perception Effort	3.20	1.38	1	5
B. Perception Talent	3.02	1.16	1	5
C. Perception rich parents	3.66	1.36	1	5
D. Perception contacts	3.79	1.24	1	5
E. Preferences Effort	3.89	1.25	1	5
F. Preferences Talent	3.24	1.19	1	5
G. Preferences rich parents	2.69	1.18	1	5
H. Preferences contacts	2.41	1.11	1	5

del esfuerzo por sobre el talento como criterio de preferencia meritocrático.

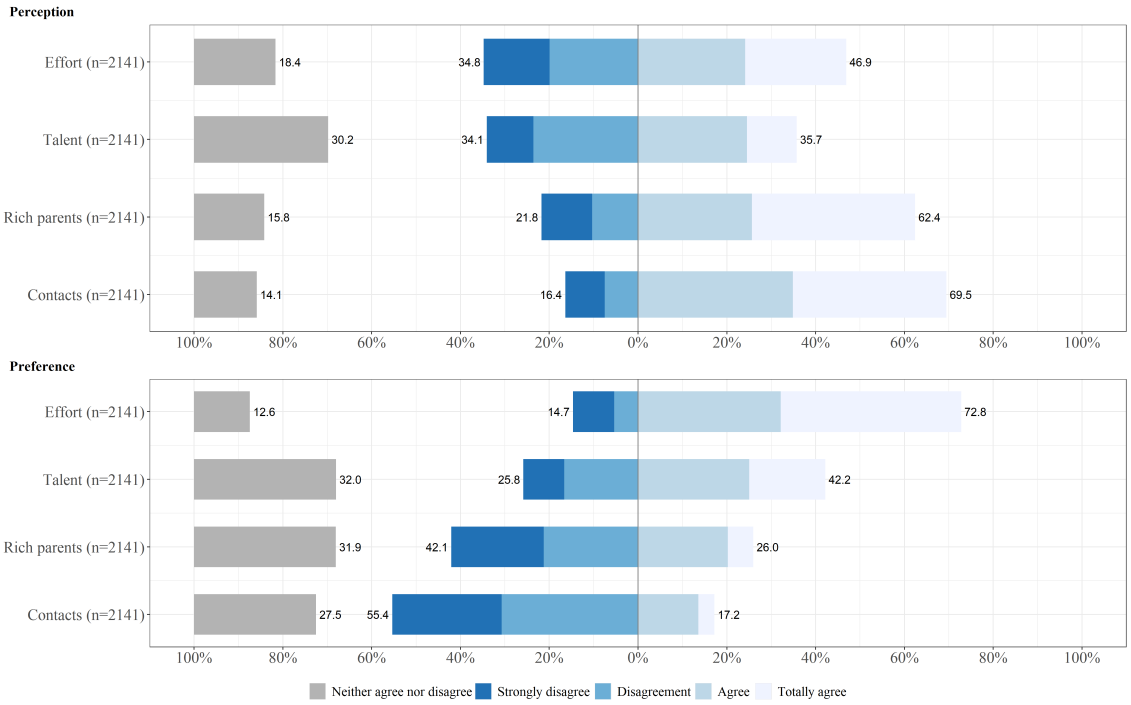

Figure 4: Descriptive plot

En la Figura 5 se observan relaciones de moderada a alta intensidad entre los indicadores que corresponden al mismo factor (por ejemplo, percepción de meritocracia por esfuerzo y por talento, r=0.56). Destacan además las relaciones entre las percepciones y preferencias de tipo meritocráticas, lo que no ocurre con los indicadores no meritocraticos.

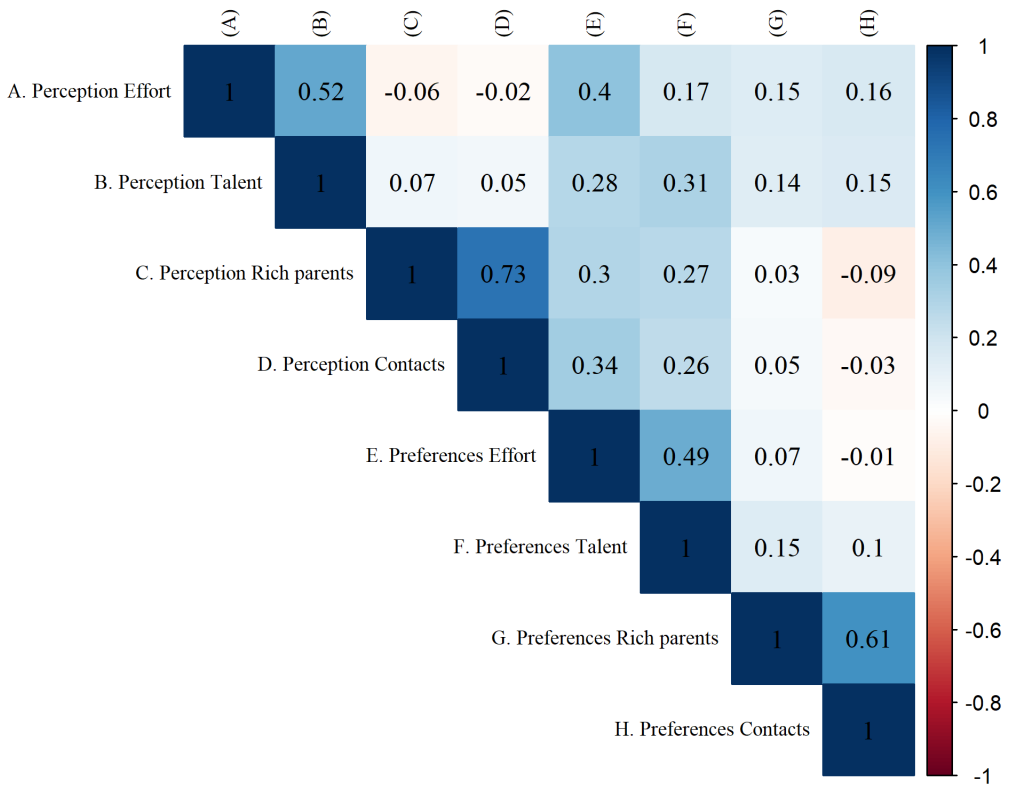

Figure 5: Polychoric correlation plot

En suma, los análisis descriptivos señalan una relativa adhesión a la moral meritocratica, las cuales se expresan en una mayor preferencia por criterios meritocraticos y una menor por no meritocráticos, aún cuando la preferencia por elementos no-meritocraticos alcanza una proporción de más de 20%. Igualmente, es observable una relativamente baja percepción de meritocracia. Se observa además una relación coherente entre los indicadores según lo propuesto en el modelo teórico en el preregistro del estudio, es decir, los pares de items asociados a un factor específico muestran correlaciones con un tamaño de efecto grande (por ejemplo, preferencias meritocrácticas por los items asociados a esfuerzo y a talento). En particular las asociaciones entre esfuerzo y talento son relevantes, ya que desestiman previos supuestos sobre que el talento no sería un criterio meritocrático (Mijs 2019), de otra manera la correlación sería cero o negativa. Junto a ello, vemos que no existe una correlación negativa entre aspectos meritocráticos y no meritocráticos, desestimando los supuestos de estudios previos que señalaban que estas dimensiones serían los polos opuestos de un mismo continuo (Reynolds and Xian 2014).

5.2 Confirmatory Factor Analysis

This section estimates the fit of the conceptual model behind the Perceptions and Preferences for Meritocracy Scale. For this, we first estimate a confirmatory factor analysis model for the whole sample, and secondly we test the order effects applying the same model to each of the three order versions.

5.2.1 Full sample CFA

6 SHOWS the results of the estimation for the four-factor model with complete sample. This model presents adequate fit indicators (CFI = 0.977, RMSEA = 0.079, $\chi 2$(df = 14) = 28,03, p = 0.014) and it presents factorial loads with weights that vary between 0.63 and 0.88. Furthermore, considering the correlation between the latent variables, it is observed that the variables with the highest correlations are meritocratic perceptions and preferences, which have a positive correlation of 0.59, while non-meritocratic perceptions and preferences do not present a considerable correlation.

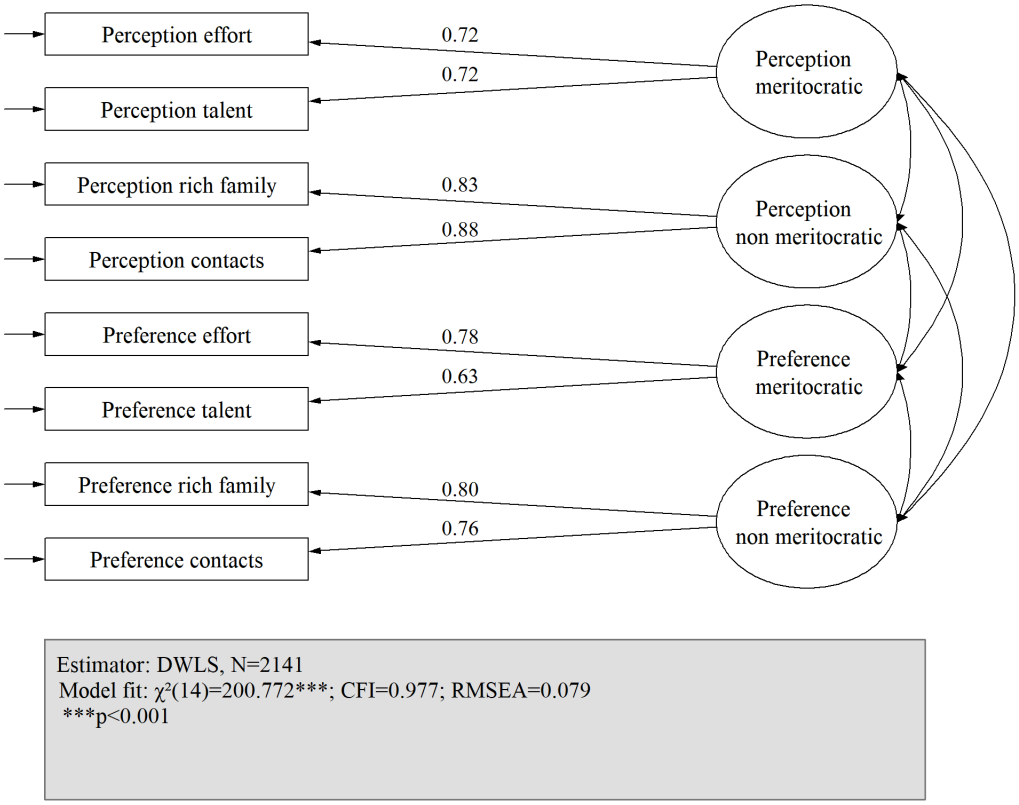

Figure 6: Confirmatory factor analysis of the Perceptions an Preferences for Meritocracy Scale

Como se puede observar en la Tabla 5, todos los modelos, independiente del grupo y el órden de los items, obtuvieron un ajuste adecuado. con CFI superiores a .95 y RMSEA inferiores a .8. Sin embargo ningún modelo logró un chi-square no significativo (algo esperable en muestras grandes), aunque tanto el modelo aleatorio como el primero obtuvieron un adecuado chi-square ratio menor a 3. El primero de los órdenes fue el que obtuvo mejor ajuste (CFI=0.998, TLI= 0.995,RMSEA=0.037, $\chi 2$(df=14)=28,03, p = 0.014), seguido por el orden aleatorio de los ítems (CFI=0.992, TLI=0.984,RMSEA=0.051, $\chi 2$(df=14)=39.09, p < 0.001). Por su parte, la escala ordenada por temáticas parece generar un efecto framing en el cual la relación entre las percepciones y las preferencias parecen sobreestimadas, afectando de esta manera el ajuste (CFI=0.984, TLI=0.968, RMSEA=.071, $\chi 2$(df=14)=64.156, p < 0.001).

Table 3: Summary fit indices according group

Model	N	Estimator	χ^2	df	CFI	RMSEA
Model 1	2141	DWLS	200.772	14	0.977	0.079
Model 2	712	DWLS	42.276	14	0.993	0.053
Model 3	717	DWLS	107.573	14	0.961	0.097
Model 4	712	DWLS	63.336	14	0.979	0.070

[1] Model 1: Complete sample
[2] Model 2: fixed order by percepction/preference
[3] Model 3: fixed order by topic (i.e: effort)
[4] Model 4: Randomized order

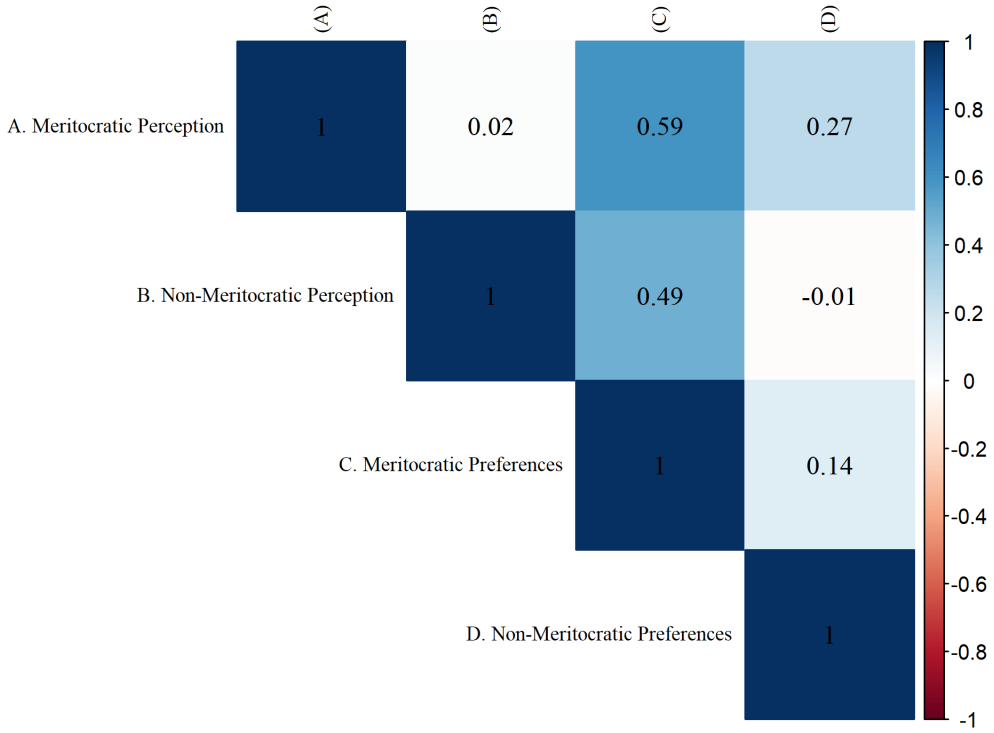

Figure 7: Latent variables correlation

Si bien todas las pruebas obtuvieron indicadores relativamente adecuados, las diferencias mencionadas entre los ajustes de los modelos según orden son estadísticamente significativas, lo cual fue evaluado a partir de un análisis de invarianza. Se concluye que entre los tres órdenes no existe invarianza configuracional, es decir, no poseen la misma dimensionalidad y por ello no ajustan igualmente al modelo teórico (Vandenberg and Lance 2000). Esto se debe al efecto producido por la aparición conjunta de los ítems de un mismo factor en el orden 1, lo cual aumenta el ajuste del modelo. Además, en el orden 2, al preguntarse seguidamente por la percepción y la preferencia en torno al mismo indicador, aumentan las relaciones cruzadas disminuyendo el ajuste del modelo. De modo coherente, el modelo aleatorio presentó un ajuste intermedio entre el orden 1 y el orden 2.

Table 4: Items according to dimension..

	Contrast Model 1 Factor	theoretical model 4 Factors	Model with M.I.
n	1769	1769	1769
CFI	0.595	0.988	0.994
TLI	0.433	0.976	0.985
RMSEA	0.226	0.047	0.036
$\chi 2$	1830.839	68.661	40.250
p	.000	.000	.000
$\chi 2$**/df**	65.38	4.90	3.32

EL modelo teórico propuesto de cuatro factores ajustó, como se observa en la tabla 4, mejor que el modelo de contraste de 1 factor. El modelo teórico ajustó de manera relativamente adecuada, pues muestra indicadores óptimos para CFI= 0.987, TLI = 0.975 y RMSEA=.041, aunque posee indicadores deficientes para la prueba $\chi 2$(df=14)=67.6, p-value=.000. Para evaluar posibles mejoras de la escala, se analizaron las relaciones propuestas por los índices de modificación. Estos indican la existencia de dos cargas cruzadas no especificadas. Cuando se generó un modelo siguiendo estas recomendaciones, hubo una mejora considerable del modelo, aunque el nuevo modelo tampoco obtuvo un $\chi 2$ ratio menor a 3 y obtuvo cargas factoriales muy bajas (τ)< 0.15, por lo tanto, siguiendo las recomendación de Brown (2006) de solo aceptar las propuesta de los índices de modificación cuando se posee teoría y evidencia sólida, se ha decidido no incorporar estos parámetros al modelo.

6 Conclusión

Studies that attempt to characterize and compare societies regarding support for meritocratic beliefs have used different approaches. As most studies use secondary survey data, they tend to grasp in the available indicators assuming that they represent an underlying construct. Nevertheless, a review of these studies reveal several non-tested assumptions, as well as the use of similar indicators to represent different constructs and dimensions of meritocracy. As the existence of heterogeneous approaches certainly have consequences for advancing in the study of meritocracy, this paper presented a comprehensive conceptual framework for the empirical study of meritocracy built upon previous research, which is then tested again new survey data.

The results of the analysis indicate that is possible to distinguish between different dimensions in the study of meritocracy based on the proposed 8-items scale Perceptions And Preferences for Meritocracy. On the one hand, perceptions and preferences proved to be two related but different dimensions, usually confounded in previous research under the label of “beliefs”. On the other hand, meritocratic and non-meritocratic dimensions are not poles of a same continuum as previosuly assumed.

The four-dimensional framework and structure of the Perceptions and Preferences for Meritocracy scale opens several avenues for future research. For instance, distinguishing perceptions from preferences will allow to evaluate the extent to which different societies are accustomed or satisfied with the performance of meritocracy, in terms of difference of what is perceived from what is preferred. On the other hand, given that non-meritocratic elements are not necessarily related to the meritocratic

ones, this open the door to assess the legitimacy of practices such as the use of personal contacts and their interference (or not) with meritocratic ideals in different societies. The consideration of structural factors, both individual and societal, will allow to advance in hypotheses of meritocratic legitimacy from a more comprehensive view than the used today based only in meritocratic perceptions. Furthermore, the impacts of different configurations of the four dimensional framework on practices and behaviors such as corruption, civic involvement and political views is an area that requires additional research particularly in times of economic crisis and growing inequality, and to which the proposed instrument aims at contributing.

7 References

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A Appendix

Table 5: Factor loads and model fit.

	Factor loadings											
	Version 1				Version 2				Version 3			
Variables	1	2	3	4	1	2	3	4	1	2	3	4
Perception Effort	0.69				0.76				0.70			
Perception Talent	0.81				0.72				0.65			
Perception rich parents		0.85				0.84				0.81		
Perception contacts		0.94				0.81				0.89		
Preferences Effort			0.85				0.82				0.66	
Preferences Talent			0.64				0.65				0.59	
Preferences rich parents				0.55				1.04				0.78
Preferences contacts				1.26				0.52				0.77
χ^2(df)		42.3(14)				107.6(14)				63.3(14)		
CFI		0.993				0.961				0.979		
RMSEA		0.053				0.097				0.070		
N		712				717				712		

Note:
Standardized factor loadings using DWLS estimator ; CFI = Comparative fit index (scaled); RMSEA = Root mean square error of approximation (scaled)

Table 6: Representativeness of the sample.

	Sample	CEP
Gender		
Men	49,82%	50,52%
Women	50.18%	49,47%
Age		
18 - 24	18,55%	18,17%
25 - 34	18,86%	17,48%
35 - 44	19.09%	19,98%
45 - 54	17,96%	19,23%
55 - or more	25,54%	25.11%
Education		
Primary or less	2,93%	15,88%
Hig school	43,23%	37,04%
Non university	32,63%	28,93%
university or more	21,21%	18,13%